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LANGUAGE OR LANGUAGES?

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SHALL we study language or languages? Long consideration of this question both as a pupil and a teacher led me to decide in favor of the former. This I am the more ready to defend because quite unprepared to join in the cry against Latin and Greek as worthless. The two most marvellous products of human life were worked out in Greece and Palestine; on this side the Hellespont the problem of secular life; on the other that of religious life. If I were to select two languages that I believe to be supremely valuable, as containing the richest concentration of human development up to the time of Jesus I would take Hebrew and Greek. To these two we owe an enormous debt, as receptacles of human progress. But while acknowledging our deep obligation to these special forms of language; and confessing a great personal gratitude for what I obtained from the study of both the language and literature of Greece, I am compelled to believe our boys and girls ought invariably to be set on the study of language and not of languages. I would require the study of language, and would leave all languages as special studies for election.

Language is a form of thought-expression: a language is a mechanism completed in the process of living by a people, for the purpose of holding and conveying desires, sentiments, ideas. To trace the growth of a language is to trace the growth of a people: to observe their development in politics, arts, industries, commerce, literature. They grow it as a crustacean grows a shell,

because they need a receptacle for their intellectual life. To trace the rise and growth of language is to follow the history of the primitive anthropoidal life from its simplest beginnings, by its mile stones of progress. Here and there accumulating language separates into diverging great lines of language; like the Aryan and Turanian. These take side growths, under local influences, and become the Sanskrit and the Panskrit, the Greek, the Coptic, the Chinese. Following on some main line, we shall find that to study language is to study the history of mind, of thought, and finally of civilization. Such a plan pursued by a student gives him, not a fragment, but a complete view. The only question is whether any course of language-study can be laid out that will not be too protracted for any common curriculum. Clearly, it is better to know Greek as a part of an ever on-flowing life of thought, than to go to it as a mental discipline; to work out its structure without any interest in its growth.

Impressed with the great waste of time in studying languages, without any other end than a meagre knowledge of the contained literature, without securing a fresh, rich acquaintance with even the authors translated; I determined to undertake a course for my own children which should avoid the waste, and the tedium, and secure if possible a delightful line of study. We began at the very formation of articulate organs of speech; for if we are to trust Mortillet and Hale, the River-Drift men had in all probability no speech, unlike the animals with which they herded. The Cave men certainly had not progressed much beyond their predecessors; but they had crossed the line of articulating language. Communication was no longer by gestures and ejaculations. Formal speech even shaped itself to stories and songs. We enter the literary age somewhere near 2000 B. C. It seemed advisable to start distinctively with that period. We read passages of the Rig Veda: studied the people and their social life and customs; what they were not, as well as what they were.

Human history has curiously come on in cycles of about 500 years. The next period would therefore be the law-making era of Manu, Moses, and Tschou; in Southern, in Eastern, and in Western Asia; a remarkable development. Here language is fuller, and a container of vigorous legislative enactments. Society is compelled to organize more vigorously. One thousand B. C. claimed our attention next, as the era of Homer and David.

Here we spent many weeks in finding out all that could be known of the great poets of nature. A half dozen translations of the Iliad were compared, and read together. The boys, I think, ended this period with considerable knowledge of Homer, and a decided enthusiasm. To be sure there was as yet no study of Greek. They had not yet had a paradigm, or scanned a line in the original. They only knew the verse was hexameter. But all the way there had been one thing greater than Homer and Manu and Brahm; that was man; man moving forward steadily to greater intellectual needs. They fully comprehended how great a thing is language; how grand a language that could serve for Homer.

Five hundred B. C. brought us to the marvellous age of Socrates, Buddha, and Confucius. Here we found not only was poetry shaped, but prose; not only social life, but art and philosophy had found expression. Clearly it had now become our obligation to know more intimately this one special form of language which had been unconsciously as well as consciously worked out by these Greeks. The lads were greedy to pull this mechanism to pieces; to see its make up; to know it in relation to the thought it had served. It was not to them in any sense a dead language; but one form of the expression of ever-living, ever-flowing thought. In the course of a few months they had mastered the rudiments; and felt the charm and power of the Greek language. As thorough a grip of Greek was accomplished as by the ordinary course would have been probably achieved in two years, or three. All this however was going on with an enthusiastic pursuit of entomology, surveying and other studies in the field, as well as manual culture in the shop.

Five hundred years more brought us to Jesus. We had so far combined the study of human life, thought and expression. We had found all these concentering about the Hellespont. At the east end of the Mediterranean into a little cup had flowed the poetry and prose combined, the sentiment and reason, from all quarters of the globe. The result had been a richer cosmopolitanism than had ever been known. The embodiment of this was Jesus. We delightfully pursued a study of Jesus as a literary character; and the dawn of Christian literature. It is well worth considering whether the effect of studying the founder of our religion in relation to his contemporaries has not of itself an advantage generally

lost. All around him stood Cicero, Vergil, Horace, Lucretius, Sallust, the Plinys, Seneca, and Tacitus in the Roman world alone. But now we find the Roman language in its prime. It has grown more immediately under the eye of a student of history. It is to form a component of our own speech. The time had come for a thorough study of a language. We are now busy with the Latin language.

This line of work will be pursued. There will be, after a mastery of Latin, a continuation of the study of human thought and life by stopping at great eras. The break up of Latin into Spanish, Italian and French will be traced. Its commingling with Teutonic forces will also be considered. Each pupil will hereafter be allowed to make a specialty of any language he chooses including a mastery of its literature. German alone will be required. The Saxon and Latin roots of his native speech will at last be at his command. Much use has been made of Whitney's Life of Language, and Paul's Science of Language. A preliminary study was made of the life and growth of American thought and literature. The course will be closed by a more independent discussion of American thought and education. Time! Well, it will not cover over three years, apart from correlated work. How much time is given to securing "enough Latin and Greek to get into college?" What advantage comes from it, as a rule, except the chance to pursue a course of collegiate studies?

THE EDUCATION OF THE PHYSICAL SENSES.

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WHAT is the educational value of the systematic training of the Physical Senses?

Idealists and realists in education are agreed as to the value of the inductive method. The mind is developed from the near to the remote, from the particular to the general, from the concrete to the abstract. Instruction is the means to the higher end, — education. Instruction is the adding of stones to the fabric of knowledge. Education is the leading of the young soul out of doors to look and learn for itself. Information is a means to an end, and information when skillfully conveyed is instruction. The end sought is education.

The dawning intelligence of the child must receive, as its *pabulum*, facts or impressions from the external world, and the question of questions is whether these facts are to be taken into or to be put into the mind. The pupil must receive a certain amount from the hands of others, but he is injured when anything is gathered for him which, without waste of time, he could gather for himself. The teacher ought to be a trained giver, the pupil ought to be a trained receiver. The pupil gathers for himself by the exercise of the physical senses. It is not claimed that the physical senses assimilate or digest mind food, but they provide it.

The physical senses, sight, hearing, smell, taste and touch have been called the "Avenues of the soul," the "gateways of knowledge," and so forth, and yet these avenues and gateways have been neglected.

How far is the mind and soul, the intellectual and spiritual of a man, dependent for development upon the exercise of the physical senses? We can suppose the case of a human being as devoid of smell, taste and touch as the blind deaf mute is of sight and hearing. There are those who maintain that a being possessing none of these senses, a living thing in human shape that eats and sleeps, must be idiotic, but there are those who maintain that this is not necessarily the case. A practical demonstration is not possible for such a human being never existed. It must be borne in mind that such deprivation to be complete must be from birth. When the senses are possessed even during a brief infancy we cannot tell how much they have ministered to the mind. There is no such condition as "unconscious infancy." Laura Bridgeman and Helen Keller are notable examples of the results of training, and of what may be called sense compensation. When a man loses an arm, we are often surprised at his dexterity in making one hand and arm do the work of both. This power, born of necessity, might have been produced apart from the necessity. The phenomenal activity of some senses caused by the lack of other senses shows what training could accomplish apart from this sad spur of deprivation.

The systematic training of the physical senses has been neglected because nature does so much in this direction without any planning on our part. Every act, every motion of the body is an education of the physical senses. The alphabet exercises,

sight and hearing, smell and taste are exercised at every meal. Touch is continuously trained by the ever busy hands of childhood. Penmanship exercises sight and touch. Playing a musical instrument exercises hearing, sight and touch. The games of children and youth are educators of the physical senses. We all value health by exercise, and we all recognize the ethical side of amusements and games, that product of manliness which Arnold of Rugby, Tom Hughes and others have so brilliantly maintained. But perhaps the greatest good that comes from games and pastimes of childhood and youth is in that education of the five senses which results. The savage is usually a "good all round man" in the exercise of his physical senses, and boys and men are never nearer to nature than when they are at play. The expression "Good all round" is used with a purpose. Civilization develops the physical senses quite as much as it develops the intellectual powers. The hearing of the savage is not to be compared to that of the skillful physician whose ear is at the stethescope, his sight is not that of an artist, or his touch that of a sculptor. But in the savage state the senses, are as a whole, more highly developed than in a state of civilization.

In our systems of philosophy it would be profitable to study more carefully the relation of the physical senses to the mental powers, — the correspondence between physics and metaphysics. What is memory? This man remembers most easily what he hears, and that man excels in remembering what he sees. When a man commits to memory twenty lines of prose or poetry which of the two senses, sight or hearing does he exercise most? Do all men exercise them equally? Is the reader's eye-gate memory or ear-gate memory the stronger?

This blind boy memorizes by the ear-gate. This deaf mute memorizes with his eyes.

What are the relations between the intuitions of the mind and the recorded, because memorized, experience of the senses. The pathology of health is a more important study than the pathology of disease.

What has been done for the education of the physical senses? Rosseau, Pestalozzi, Herbert Spencer and many others have touched on this subject. The object lesson, the kindergarten and the schools of manual training are efforts in this direction. But, so far as the writer knows, there exists no thorough and scientific

training of the physical senses. It should begin at the mother's knee and have its place at the university.

The gymnasium for the training of the physical senses finds its parallel in the gymnasium for the training of the physical powers. A boy may grow up strong, healthy and graceful without the drill of the gymnasium. Running, boating, skating and other exercises may, and often do secure the desired results, but the successful results of this haphazard development are after all, what we may call the fortunate percentage. If we are to have a good average we must have recourse to the gymnasium with its qualified instructor. Even so while nature educates the physical senses, the best results can be secured by supplementing nature with systematic instruction.

Without observation and experience the inductive philosophy is impossible. Untrained observation produces limited and unreliable experience. The more we educate our physical senses the truer and the finer our philosophy will be. Development is the result of the legitimate exercise of the senses. Injury is the result of over-exercise and atrophy is the penalty of disuse. If a child is encouraged to try how far off he can stand and hear the tick of a clock, he will find that the distance increases with exercise. A distinguished occulist affirms that fifty per cent. of the short-sighted might have been saved from the penalty of wearing spectacles by judicious care in childhood and youth.

A military company went out for drill in judging distance. It is one thing to shoot at a target the exact distance of which is known, and quite another to sight your rifle at this or that object in an unfamiliar region. Guesses at the same object ranged from four to seven hundred yards. Why should young men attain their majority before they are asked to judge distance? A group of boys of about twelve to fourteen years of age were asked to tell how far apart two trees were. There were seven guesses. The distances given were seventeen, twenty, twenty-two, twenty-eight, thirty, thirty-one and thirty-nine feet. The correct distance was twenty-five feet six inches. A straight edge measuring twelve inches was held up before a bright intelligent girl of ten years of age. She judged its length at "almost half a yard."

The writer was relating these two cases to a superintendent of schools in one of our cities, and he was frankly told that he had been unfortunate in the boys with whom the experiment had

been made. Three young ladies from the high school were approaching and the writer suggested putting them to the test. They were about sixteen years old. They were asked How high would you say this fence is? Give the height in inches. The guesses were twenty, twenty-six and thirty inches. The measured height was twenty-five inches. Judging distances and dimensions may be so arranged as to be a recreation.

In questions pertaining to color there is much confusion and ignorance. Peculiarities and defects of vision should be detected before a child is a year at school, and the detection, in many cases would lead to the cure. Color blindness is of different kinds and degrees, and much of the confusion of it might be overcome were its treatment commenced in the primary school. Why should not children be taught to name colors and shades at sight?

Thirty-five years ago there was a boy in school who excelled in composition and in declamation, but he got into endless trouble in the geographical examinations on the large wall maps. When that boy took the pointer, and went up to the map, all the class knew there would be fun and trouble. He knew it too, poor fellow, and so did the teacher who endeavored to discipline the carelessness out of him. But you cannot punish color blindness out of a boy, although it has been tried at regular intervals since the world began. That boy left school and went into a dry goods house. Here he became famous for his queer notions concerning the colors of spools and dress goods, and for a certain pertinacity in insisting that he was right. The ladies endured it like martyrs for the city was small and the lad was comely and well known. Of course the end had to come. Dry goods was not his forte. He went to college for two years and then drifted to Australia, and fortune smiled upon him as sub-editor of one of the best daily papers of that far off land.

Sight should be trained in relation to memory. Who has not heard of the prodigies who can repeat all the advertisements in the morning paper, or who can pass a store window and then enumerate in place and order the fifty or sixty articles that are in it. These are exceptional cases, but powers of observation, description and memory can be developed simultaneously. Who can study the life and labors of Darwin without being impressed by the fineness of his physical senses, especially that of sight.

Every mathematician knows how much the trained eye has to do with our grasp of the formulae of our calculations in the higher mathematics. Pure reason is aided by the sense of sight. The process as a whole is not mechanical, but many of the steps of it are. Some scholars of late years have been giving a good deal of attention to symbolic logic, and, to any one who has given no attention to the subject, it is surprising to how great an extent the correctness or the fallacy of a chain of reasoning can be made visible by the use of symbols. Pure geometry is an appeal to the judgment, made by reason, through the gate of sight. A blind man can master the problems of pure geometry, but it is by substitution of the senses. It is of great aid to bring trained vision to the study of a problem.

The cultivation, or rather the education of eye memory has never been systematically pursued. A similar statement can be made with regard to the sense of hearing. "He that hath ears to hear let him hear." Keeping the ears open comes naturally to a few. We may not all have as fine an ear for the sounds of the city as had Dickens, or for the voices of the woods as had Thoreau, but much can be accomplished by systematic effort. It is highly moral to be given to eavesdropping at Nature's door. We sometimes regard the absence of all sentiment for and appreciation of Nature as being a mental and moral defect. Wordsworth is the poet of nature. In "Peter Bell" he holds up to us a dull prosaic soul, —

> "A primrose by a river's brim,
> A yellow primrose was to him
> And it was nothing more."
>
> . . . . . .
>
> "The soft blue sky did never melt
> Into his heart; he never felt
> The witchery of the soft blue sky."

Suppose Peter Bell had been taught how to see and how to hear. The connection between the moral and the physical senses will gain in significance with the systematic training of the latter.

With regard to the senses of taste and smell there is much room for education. Men grow up with an extremely limited vocabulary in this connection, and our vocabulary is indicative of our knowledge. Concerning taste we have four adjectives,

sweet, *sour*, *salt*, *bitter*, and we are no better off with regard to smell. Such qualifying words as pleasant, unpleasant and their synonyms are descriptive of our feelings, but are descriptive of the objects themselves in the most vague and general way.

Every man cannot be an analytical chemist, or an expert in teas and spices, but if he is to make the most and the best of every day life he must educate his senses of taste and smell. The man who affects to despise the pleasure to be derived from the proper gratification of these senses insults nature. No divine kingdom is composed of meat and drink, but the milk, honey and spices are the gifts of the king. This is not the doctrine of indulgence but of temperance. As Matthew Prior said two hundred years ago "They never taste who always drink." There is a point up to which the proper appreciation of a good dinner is an aid to morals, but beyond this fine line lies the devil's country of sensuality. If one wants to know how very ignorant the average boy is as regards taste and smell, the experiment may be made with a number of them. Submit to them any taste or smell, familiar or unfamiliar, and the result will reveal in the first place the limited nature of their vocabulary, and in the second place the variety of opinions within that limited range of words.

There is a practical side to this which is valuable to a utilitarian age. The chief cooks of the leading hotels get larger salaries than our college presidents. In matters of taste we cannot leave out due regard for the physical sense. Two famous judges of wine broached a cask of a rare vintage. Both declared it good, but one insisted that there was a trace of iron in it, and the other was equally certain that he distinguished a flavor of leather. When the barrel was emptied there was found at the bottom of it an iron key with a tag of leather. They were both right. This was an extreme instance. Something less than this, and something more than we have, could be attained.

The sense of touch has to do with our estimates of specific gravity, and of comparative weight. It informs us of other qualities such as softness, hardness, elasticity, and so forth. In every walk of life it is as important to have the trained touch as to have the powerful grasp. The Arab Sheikh who severed the silken scarf with his scimitar was as good a swordsman as the Norman Knight who severed the iron bar with a mighty blow of his broadsword.

In our theories of education a prominence is given to industrial and technical training. This is a recent development. It began with the great exhibition at London in 1851. There British and American artesans found out that they lacked something. But hitherto we have not begun at the beginning, for at the foundation of all manual expertness and dexterity is the training of the physical senses. Nor is it in a less degree essential to the best scientific research. Metaphysics and psychology have many questions to ask the physical senses.

It is not necessary to institute any comparison as to the value of the systematic education of the senses. The question is not — whether or not this is a more important study than Latin or a modern language, but should it have a place in the curriculum of our schools. Are our physical senses to depend for their development upon the necessities of existence and the chapter of accidents? Are many of our capabilities to lie dormant or to live in semi-torpor, because there is no one to awake them and to lead them into activity?

The centres of the material, intellectual and spiritual worlds are one, viz., life. We employ the analytic and the synthetic methods in the study of this problem of problems. The trained physical senses are as much of an aid to the synthetic as they are to the analytic method.

Every boy and girl cannot become a scientist, or even an original inquirer in any department of knowledge. We teach Latin and Greek to a thousand boys. Perhaps ten in a thousand became really good classical scholars, and perhaps only one in a thousand becomes a famous classic, but all of them in the course of their lives are thankful many times, for the benefit which they derive from even "a little Latin and less Greek." The education of the physical senses will not of itself make great thinkers or original investigators, for soul as well as sense is needed, but the training is not lost on those on whom it does not produce marked results. The average training will always produce its proportion of philosophic experts.

Who will write the first class book entitled "THE PHYSICAL SENSES AND HOW TO TRAIN THEM." This is a department of education which should begin in the kindergarten and be continued with the university course.

It has been said that in Italy one sees more with the memory

than with the eye. The interesting problems which are related to association of ideas, and to unconscious cerebration are closely related to a scientific study and development of the physical senses.

An editorial in a leading newspaper contains these words: "There is something in both school and college education as now conducted, or rather something left out of them, which positively unfits a man for what are considered the more practical callings. We will be told that school is no place to learn to use one's hands and one's eyes. Those who think so must be content that schooling should continue to bear the reproach of unfitting the majority of our citizens for life." The writer does not endorse this quotation, but it shows the drift. School is the place in which to learn to use both hands and eyes. You do not quite meet the case by mechanical training and technical education; you do meet it by the systematic training of the physical senses.

The present is a favorable time and opportunity for the consideration of any proposed change. The Association of Colleges in New England, a body which comprises the great majority of New England colleges, has recommended certain radical changes in the studies of the grammar schools. The proposed changes are the introduction of elementary algebra, physics, natural history, and plane geometry, with the optional study of French, German or Latin, and, to make room for these studies, a reduction of the time now given to arithmetic, geography and English grammar.

Elementary physics, natural history and plane geometry are much more in the direction of the education of the physical senses than are the present studies, but those studies are not that systematic training which is desired.

Half an hour each school day would be sufficient time for this training. It could be conducted in the play ground as easily as in the schoolroom. In it, more than in any other study could work and play be judiciously combined. Educators are agreed as to the end to be attained. It is a question as to the best means to the end.

Prof. Colin D. Wells quotes as follows, with approval, from the American Society of Naturalists at their Baltimore meeting, "In the lower grades the instruction should be chiefly by means of object lessons; and the aim should be to awaken and guide the curiosity of the child in regard to natural phenomena, rather

than to present systematized bodies of fact and doctrine." President Dwight expresses a similar opinion in his address before the Association of Colleges and Preparatory Schools. There is substantial agreement as to the end. It is a question as to means and mode. There is more to be accomplished by the systematic training of the physical senses than our philosophy of education has yet dreamed of.

A LESSON OF CONTENT.

JULIA H. MAY, STRONG, MAINE.

Because you cannot hold
  The firmament's huge weight,
Like Atlas in the legend old,
  Why so disconsolate?
You surely can lift up a little cup,
And some poor thirsty one shall drink it up.

Because you cannot tell
  The truth to distant lands
Till all the world shall know it well,
  Why fold your idle hands?
Cannot your loving lip be reconciled
To tell the story to a little child?

Because you cannot gain
  A wondrous Waterloo;
In life's great battle, why remain
  Unarmed with foes in view?
Be not afraid. Like David, take your sling,
And do some humble part in conquering.

Because you cannot wear
  The costly pearl, and gem
To sparkle in your shining hair
  Where all can look at them,
Why do you grieve? That rose-bush by the way
Gives you fresh blossoms for your breast, to-day.

Not riches, but content;
  Not greatness, it may be;
Not glory, but the foot-step bent
  Where duty calleth thee.
He asketh not, oh! sad discouraged one,
How great? how strong? how sweet? but, "hast thou done?"

HERBERT SPENCER'S "GUIDING PRINCIPLES."

A CHAPTER ON THE MEANS OF ACQUIRING A KNOWLEDGE OF THE MENTAL DEVELOPMENT OF THE INDIVIDUAL.

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ONE can hardly speak of Herbert Spencer's masterly work on education without at the same time expressing a desire that its teachings should become more widely known. Every parent who cares for the future welfare of his children should not only read and re-read this work, but also endeavor to make its principles an intrinsic part of his mind, and apply them day by day and hour by hour; and if it is of such importance to parents, it is of equal importance to teachers, and to all who have the slightest interest in the subject of education or the future welfare of the human race. There is, however, a liability to error in the practical application of the six "guiding principles" enumerated in the chapter on "Intellectual Education," arising from an inadequate conception of their real or relative value. These principles are given in the following order: —

1. "Proceed from the simple to the complex."
2. "Start from the concrete and end in the abstract."
3. "The education of the child must accord both in mode and arrangement with the education of mankind as considered historically."
4. "Proceed from the empirical to the rational."
5. "The process of self-development should be encouraged to the fullest extent."
6. "The method of instruction should 'create a pleasurable excitement in the pupils.'"

Mr. Spencer calls each of these laws a "test by which to judge any plan of culture," and evidently intends that they shall be used *collectively* for this purpose; but the relations of these "principles" to the "method of nature" or their comparative values as "tests," are not clearly shown; and in consequence the modern pedagogue frequently makes a choice of one or two as

sufficient for his purpose, and tests his system by these alone. We need not be surprised that he falls far short of expected results, and charging the error to the principle, esteems the latter as of little worth. As we proceed we shall more clearly see the cause of such a misunderstanding and of the resulting failures.

Limiting ourselves in a former chapter to the study of that which we wish to modify,* we found that the mind as well as the body unfolds in a definite order fixed and controlled by some great natural law. In face of this fact, the law of Pestalozzi, that we should intelligently follow this order of development in our efforts to modify it, became self-evident. It is the aim of the present chapter to treat of the means through which we may obtain a more complete knowledge of this mental development of the individual, and to re-classify the principles of Mr. Spencer.

In the accompanying table we have given what seems to be a natural arrangement of the sources of our knowledge of mental development, and we will at once proceed to consider them seriatim.

We are obliged to concede primary importance to the means given under Section A. For outlines of the growth of mind we naturally turn at once to the individual. Until quite recent times, this was the source of all the knowledge of the subject that we possessed. This knowledge, though meager, came to us through our efforts in education and in turn had its influence on these efforts from a remote antiquity. Pestalozzi was perhaps the first to insist on a more careful observance of such development, and a corresponding change in our methods; but he looked little if any further for such knowledge than through personal observation of the children under his care. Since his time a still more careful study of the individual has been enjoined, and to-day such study is deemed of greater importance than ever before. We must constantly bear in mind that it is the actual development of each individual that we should wish to see if we would intelligently seek to modify it, and though in general such knowledge may be more easily obtained through the succeeding sections, in no single instance can such knowledge fit a specific case. The development of the individual, though in the main the same, yet differs from that of all other individuals, and in

* EDUCATION, Vol. XIV., p. 466 (April, 1894).

Group I.

Special, definite, concrete sources of knowledge concerning the order of mental development in the individual.

1. In its particular forms. [Principally through individual research].
   - **Section A.** Through analysis of the individual.
     - a. By personal observation.
     - b. By communicated observations of parents and companions.
   - **Sect. B.** Through synthesis from a knowledge of the immediate or more prominent factors of the individual.
     - a. In its parentage and family history.
     - b. In its environment.
2. In its normal form. [Principally through research of others].
   - **Sect. C.** Through analysis of the present condition of the race.
   - **Sect. D.** Through synthesis from a knowledge of the factors of the race.
     - a. In its history.
       - aa. From history, folklore, mythology, philology, archæology.
       - bb. From comparative study of races, allied and remote.
     - b. In its environment.

Group II.

General, indefinite, abstract, sources of knowledge concerning it.

1. "Dictates of abstract psychology."
   - a. Simple to complex,— Spencer's first principle.
   - b. Concrete to abstract,— Spencer's second principle.
   - c. Empirical to rational,— Spencer's fourth principle.

Corollaries

A course which shall intelligently recognize the development of the individual.

1. Will be productive of an intrinsically happy activity.
2. Will be pursued by the pupil with the least help from the teacher.
3. Will enable us to achieve higher ideals.

consequence more or less from the normal. Such variations determine in a great measure the ultimate status of the man and his position in the social organism, and they certainly should ever influence both the teacher's aim and method. When such variations, mental, moral, or physical, loom up as obstacles to daily routine work they command attention, for they are the greatest foes a teacher has to meet; it is a matter for regret that when these variations "move for good" they receive so little care. Individual variations can be known through but two channels; personal observation, made during our period of contact with the pupil, and communicated observations of parents or companions. It needs no space to demonstrate that personal observation should have the greater value. It may be objected that the teacher has not the time in which to make such minute study as a more careful noting of individual development would require. Such exhaustive study is not demanded. The main outline of development will be the same for all. It is this that we should know if we would better lead the child. We must have a true *normal* in mind else we shall neither quickly nor clearly see the *abnormal*.

Turning now to Section B, we leave analysis for synthesis and look for a conception of what the product is likely to be, through a knowledge of certain factors which have played an important part in giving rise to that product. These factors form two important sub-sections. First; parentage and family history. Second; the factors of the environment. A public teacher is indeed debarred from the greater part of the knowledge classed under the first sub-section, yet in many cases he may easily obtain sufficient insight to enable him to look for the appearance of traits which he wishes to accelerate or retard in their development. He may thus place himself in the position of one who knows for what he is looking, and who thus has a great advantage over one who is suddenly brought face to face with a growth the more easily controlled beginnings of which have escaped his notice.

The second sub-section is more open to the study of the public teacher, and is a source of knowledge not to be lightly considered. The special environment of a single child and the general environment of the community are strong factors which enter into the ultimate product. A Western or Southern school in certain large districts will, through the influence of these factors, require a somewhat different course on the part of the teacher from that

demanded in an average Eastern school; and even among the Eastern schools the success of a teacher in one place and his failure in another is due to the adaptability of his course to the product of factors in the environment in the former instance and its non-adaptability to this product in the latter. The greater success which a private tutor is likely to attain is due in great measure to the extra time and greater opportunity given him to become acquainted with these more prominent factors of the individual; though we must bear in mind that the extra time and greater opportunity for the study of the individual, as set forth in section A, is also an important factor in this success. By far the greatest importance which attaches to this section, however, should be, and is to a great extent, felt in the home. Parents look for the earliest appearance of characteristics likely to be inherited from them, or produced by surrounding influences. If either parent be especially fond of music, the first promise of such talent in the child is noticed and encouraged, if for no other object than the immediate gratification of family and friends. If either parent be interested in the natural sciences, the first notice of flowers, shells, insects, etc., by the child is sure to give peculiar pleasure, and, in consequence, these objects will be purposely placed in the child's way. Such a course on the part of either parent gives, intentionally or unintentionally, a stimulus toward further or accelerated growth in the same direction. If, on the other hand, traits which are undesirable are likely to be inherited, or developed by early surroundings, all things tending, in the estimation of the parents, to accelerate the development of such a trait are, as far as possible, kept from the child, — while those influences supposed to retard or abort such a development are called into use. Consciously or unconsciously, this knowledge of personal or family traits, or of favorable or unfavorable surroundings, has its influence on the methods of training used in the home; and a more careful and scientific use of such knowledge would doubtless enable us more quickly to produce desired modifications, and more surely to attain our ultimate aim.

We have thus far confined our study to the *special development of the individual* and its more prominent factors. Constantly bearing in mind its primary importance, as set forth above, we may now turn to the *normal development of the individual* and its more prominent factors as shown through the study of the two sections that follow.

We are obliged to give section C higher rank than that which follows, on account of its close relationship to section A, and because it is the only source through which we are able to note the direction or tendency and amount of that variation in the race as a whole, which has been allowed under the great law of heredity. The teacher's knowledge of this department must depend largely on the generalizations of others. If he would hasten the day when we may possess as full and accurate a knowledge in this field as we require, he should, if time permits, make careful notes of his own observations under section A, which, in connection with similar observations by thousands of others from the cradle to full manhood, is our only means of obtaining this desideratum.

However careful our work may be in this and the two previous sections, it will at best give us but outlines, while for practical work in the school-room or the home, we need more detail. This detail we shall find by turning to

SECTION D. *The factors of the race.*

a, In its history.
b, In its environment.

It is here, for the first time, that we come into contact with the principles of Mr. Spencer; and of these it is the third or Comte's law (that "the education of the child must accord both in mode and arrangement with the education of mankind as considered historically") which first claims our attention. Important as it is, — in principle it controls the growth of all organic life, be it animal or vegetable, — it should never be made an independent test. The line of development of the race would have no value for us if it had no relation to the actual development of the individual. The extent of this relation is the measure of its value. As the development of the individual is never a facsimile of that of the race considered historically, it would follow that an unlimited acceptance of this principle as a guide would of necessity often bring us into direct antagonism with nature in all those lines where she has established variations in order to eliminate the non-essential; to hasten the progress of the individual over the road it took such ages for the race to construct, and to bring her charges into harmony with present external conditions. Excepting these variations, which, as we have already seen, can

only be known through the study of the previous sections, the law is valid; and as such variations are less numerous than the points of similarity, it becomes a powerful aid in assisting us to a more perfect knowledge of the individual's development. It enables us not only to verify or correct doubtful conclusions reached through former sections, but yields in addition an amount of probable detail heretofore unknown. The sources from which we may obtain the knowledge required are outlined under this section in the table. The value of the sub-section *bb* lies in the fact that the individuals of such races often present, at their maturity, a stage of development very similar to that of our own branch in a remote past; and the study of their present development cannot fail to present us with many an example of parallelism, more or less exact, with our own early growth.

Whoever has gone thus far in the attainment of the end in view has not only been acquiring a clearer vision of the growth of mind, but has also been enabled, through the material discovered, to obtain a more correct idea of its structure. Not only this, — but he has found, and may still find, especially in subsection *b*, under D, a wealth of information regarding *the use and effect of forces in the production of variations in this structure*, which aside from its vast importance to one who would aim to modify mind in accordance with some high ideal of his own, — is of such value to the psychologist who would learn of the origin of mind itself. There is room and material here for researches which shall bring us as important discoveries as those of Professor Cope on the effect of impacts and strains in the origin of foot structure in the *Mammalia*, and on the mechanical causes of the origin of the dentition of the *Carnivora*, *Rodentia*, etc.†

Thus far we have dealt with special, definite and concrete sources of knowledge concerning our desideratum. We may now turn to those sources which we are obliged to class as general, indefinite and abstract. We shall find these arranged under Group II. of our table.

In turning for aid to these principles we must constantly bear in mind that they are in great measure founded upon the knowledge we already possess of former sections, and must appeal to this knowledge for verification. This being the case, they can only be used as guides, where the *actual lines of development* are

† See chapters on Mechanical Evolution in "Origin of the Fittest" and articles in *The American Naturalist*.

either unknown or indistinct, and are by no means to be considered as trustworthy guides if taken alone. It must be remembered that Mr. Spencer himself, in speaking of his six principles, calls them guides merely to enable us "to make *empirical approximations* * toward a perfect scheme"; and although we found it necessary to give the third of these principles much higher rank, the others must remain where this just estimate of their value places them. An examination of the first principle regarded as an independent guide in education, will serve to make this value still clearer. We will make three valid objections to such a use of this principle.

1st. This principle gives us no idea concerning the brevity or extreme length of our course to a certain end, regarded as a whole, — or concerning the parts of this course, simultaneous or successive, as compared with each other. One may construct a fourteen weeks' course, a course of a few lessons, or, on the other hand, a course longer than life itself, in Physiology, Language, Mathematics, etc., which shall be strictly based on this law. The amount of simplification and consequent number of steps required in different parts of our curriculum, or the number of examples or amount of material necessary to enable the pupils to take these steps, can only be ascertained by a knowledge of the capabilities of the individual as made known to us through previous sections. Or, in other words, as the law of heredity gives us at one time a demand for less detail, and at another a demand for more, it is clear that the relative fullness or absence of detail required in simultaneous or successive parts of our course must depend on the actual condition of the individual mind in its *counter* parts, as ascertained through the study of its development.

* The italics are the writer's.

It is not always as profitable as it is popular to fight men of straw, even in education.

Don't compel your pupils to eat, drink and sleep on your favorite study, to the omission of all else.

Don't load up your own memory or that of your pupils with a lot of unmeaning facts. L. A. Y.

CHARACTERISTIC STUDIES IN GREEK ART.

MISS MAUD BURNSIDE, BUFFALO, N. Y.

A THOUSAND tongues speak to us from Ancient Greece, and what is not expressed in philosophy, oratory or poetry, becomes articulate in architecture or sculpture.

The chief sources of our study of Greek sculptures are found in the art galleries of London, Berlin, Paris, Munich, Florence, Rome and Naples, and in the cast collections of Boston, Amherst and Minneapolis, for aside from the Cypriote statues in New York, the United States has no Greek sculptures of any value. The cast collections, however, are exceedingly valuable, as they offer the opportunity of studying the consecutive development of Greek art, and in this respect, have an advantage over any one European collection. Beginning with the European gallery which is nearest home, the British Museum, we find that it contains the finest pieces of sculpture in existence, the "Elgin Marbles," which in the early part of this century were sent from Greece by Lord Elgin, the British Minister in Turkey. A proof of the ignorance of their real value is found in the indifference with which they were received. The British government would not pay the transportation expenses, and when they had arrived in London, they were left in temporary sheds, exposed to the weather while the questions were agitated, "What are they worth?" and, "What shall be done with them?" Finally, they were incorporated as part of the British Museum.

The marbles consist of gable sculptures, metope ornament, and parts of the frieze from the Cella wall of the Parthenon at Athens. The gable sculptures are a colossal Theseus and Three Fates. Theseus is mavellous for its dignity and repose; the Fates for the drapery treatment. The metope sculptures are reliefs from the metopes or spaces between the triglyphs, and represent contests between the Centaurs and the Lapiths — (which merely meant a conflict between the forces of civilization and barbarism.) The other frieze sculptures were taken from the wall which surrounds the cella or inner sanctuary. The subject is the Panathenaic procession, which represented the Athen-

ians bearing the newly-made peplos, which was to be placed upon the olive wood statue of Minerva, in the Erechtheium. This procession, in bas-relief, is full of vitality and remarkable variety, which seems the more marvellous when we remember that the frieze could only be seen to advantage from a very small number of standpoints. Besides the Elgin marbles, the British Museum contains some reliefs from the tomb of Mausolus, at Halicarnassus. The Louvre proudly possesses the Venus of Milo, a work by Alexander of Antiocheia, which was found about 1816. This superb creation is full of noble dignity and repose, and far surpasses the less majestic Venus de Medici. The Diana of the Louvre is one of the finest works, to which the name of no sculptor can be attached. The statue was in the palace of Versailles before it was sent to the Louvre. The Fighting Gladiator (The Boxer) was named at a time when people sought to attribute every antique to a Roman origin, and consequently gave it a Roman title. In reality, it would seem to represent a foot soldier warding off the attack of a cavalry-man. The Victory of Samothrace is a superb creation, so fine in its drapery treatment! Aside from these statues the Louvre contains a few metope sculptures from the temple of Zens at Olympia, which represent battles between the Greeks and Amazons. These Olympian sculptures belong to a period just preceding the time of the Elgin marbles. The latter were completed about 440, B. C.

If we would see the sculptures of the period just prior to that of the Olympian works, we must go to Munich, where, in the Glyptothek are the Aegina marbles, from the temple of Minerva at Ægina. These figures were executed about 470, B. C., and though they have some traces of the old archaic smile, still they show skill in execution, anatomical knowledge, and altogether far surpass the works from Assos, which belong to the period 500, B. C. These gable sculptures show studied varieties of posture, and adaptability to position; as, the figures near the ends are lying down; the warriors near the centre stand erect; nor is there any monotony, as one or two heroes have fallen not far from the central figure Minerva.

The Berlin Museum contains sculptures from the frieze of the altar of Jupiter at Pergamus, and are works of the Alexandrine period; therefore show a tendency toward the extravagant and toward complexity of action.

The Uffizi gallery contains, in the Tribune, the Medici Venus, the Little Apollo, the Scythian Slave, the Wrestlers, and the Dancing Fawn; — all Greek originals, but none to which the name of a master sculptor can be attached. The Medici Venus was found at Tivoli, in Hadrian's villa. It was bought for the Medici collection and sent to the Uffizi gallery late in the seventeenth century. In regard to execution, this is one of the finest statues ever unearthed near Rome. The name Cleomenes is attached to it, but this is probably a forgery. The arms were restored by Bernini, who, though a clever genius, was much too affected, too sentimental, and too realistic to restore an ancient Greek statue. Bernini curved the finger-tips, and the Greeks always avoided that affectation. For a long time this marble creature held sway in the kingdom of beauty, but her glory pales in the presence of the nobler Milo Venus. Beside the Medici Venus stands the Apollino (Little Apollo), a graceful boy, an effeminate type quite lacking in the dignity and beauty of the Apollo Belvedere.

The Dancing Fawn shows a tendency toward muscular development, and would seem to belong to the Alexandrine period. He represents a simple creature, happy in his own animal condition. The Wrestlers is probably a work of the same period, though here the muscles are elongated and not so conspicuous. The Scythian Slave (The Arrotino) was for a long time considered the representation of a Roman barber. It is now believed to be the Scythian slave sharpening his knife to flay Marsyas; and is very much like a relief in the Borghese Villa, which represents the Scythian in this act.

The Niobe group of the Uffizi consists of fourteen figures, of which the principal one is Niobe protecting her youngest child. The myth relates that Niobe openly boasted of her many beautiful children, and laughed at Latona's pride in her two, for which the immortal archer and his sister Diana shot down, with their arrows, all the children of Niobe, and the sorrowing mother was petrified by her cruel experience. This Florentine group was found near the gate of San Paolo in Rome, about 1583. Cardinal Ferdinand Medici purchased the statues for 7,938 francs, and made them part of his Roman villa. In 1779 they were transported to Florence by Peter Leopold. A beautiful torso in the Vatican, which is an exact counterpart of one of the Niobe chil-

dren in the Uffizi, is supposed to be one of the original group. In this the drapery is carved with greater freedom, the cutting is deeper, and the work that of a master hand. Some of the figures in the Florentine group are finer than others. Possibly one or two do not belong to the group at all. The old man — formerly known as Niobe's father, Winckelmann declared to be the pedagogue. The statue of Niobe and the youngest child ranks high among works of art. It has even been compared to the Laocoon group. The following Greek epigram is said to refer to the original: —

> "To stone the gods have changed her, but in vain;
> The sculptor's art has made her breathe again."

In the Naples museum we find the Farnese Bull, representing Dirce's punishment. This, too, is a work of the Alexandrine period, and was sent to Naples from the Farnese Villa at Rome. Here, also, are the colossal Farnese Hercules, and many pieces from Pompeii and Herculaneum, as well as the mosaic of the Battle of Issus.

In Rome, aside from the villa collections, there are the museums of the Vatican and the Capitol. In the latter we see the Dying Gaul, an Alexandrine work, as to time. It is popularly known as the Dying Gladiator, a name which was probably given it in attempting to assign to it a purely Roman origin. It is doubtless a copy from a Greek original which represented the death of a Gallic herald. The horn would indicate the office, and the bristly hair would bespeak the Gallic origin. The Amazon of the Capitol is supposed to be a copy of the work of Polycletus. The Marble Faun is only one of a very popular type, of which there were in Rome, at one time, thirty copies. The Belvedere Apollo of the Vatican is also a Roman copy of a Greek work of the Alexandrine or late period. The Belvedere Torso, a trunk of Hercules, probably belongs to the same time, judging by its anatomical details. This work was made a life study by Michael Angelo.

In Greece itself, there are few remains outside of Athens and Olympia. The principal ruins in Athens are found in the Ceramicos or ancient burying-ground, which was used in the time of Phidias. These monuments all represent calm resignation rather than violent grief. On the Acropolis are some of the metope and

frieze sculptures, while in the museum are Dr. Schliemann's Mycenae collections. At Olympia, besides the metope reliefs from the temple of Zens, there is the famous Hermes by Praxiteles, and the Victory, by Paeonius, — the only works to which the names of master-sculptors can positively be assigned.

Up to the middle of the eighteenth century, Rome was the only centre for antiques, and here collections were generally in gardens. All this was before the times of Winckelmann, a humble German scholar who appreciated the value of Greek literature at a time, before it was popularly studied in Europe. After being taught how to appreciate a picture of Raphael's and shown the superiority of some Greek sculptures then in Pompeii, Winckelmann wrote an essay on the "Imitation of Ancient Greeks.' Later in Rome, he published his history of art. Winckelmann did not begin by establishing principles, but sought rather to prove wherein the old theories were built upon a wrong basis and that the principles of Greek art were *ideality*, not realism; and calmness and repose instead of theatrical attitudes and extraordinary positions; also, that the portrait sculptures found in Rome were of necessity realistic, therefore not Greek. The early Christian art represented elongated bodies and miserable physiques, this, no doubt, on account of the antagonism of Christianity to pagan studies and so to pagan art. The renaissance statues of Michael Angelo, Cellini, Bologna and the others represent particular situations, individualities, and a tendency toward executional details. All this was in direct opposition to the art of Greece, which aimed to embody *general truths* in the simplest possible manner. The modern works of Thorwaldsen, Canova and Dannecker copied Greek effects of repose and grace, but missed the spirit, because they copied copies and did not use models from nature. The renaissance sculptors, on the other hand, copied nature, but studied Greek works of a period of decadence, so ancient sculpture has not yet been reproduced in its old perfection. "In sculpture, at least," says Taine, "the Greeks were perfect masters, all since them has been deviation."

Greek art had its chief stimulus in religious sentiments and the anthropomorphic views of the Greeks had much to do with the perfection of their art, since it was but natural that they should seek to find the most beautiful forms for their gods. Then again, the games and the gymnasia were the forerunners of the statues of athletes, — those marbles of such absolute physical per-

fection. The types of Greek statues were very few in number. This allowed room for great originality in treatment, and the perfection of technical skill. Each of the types had its general meaning; — Venus, meant love; Fauns, animal life; Hercules, strength; Cupid, love; Amazons, heroism; Mercury, gymnastic culture; Diana, chastity; Apollo, art; Silenus, fatherly affection; Bacchus, plenty; Minerva, wisdom; Jupiter and Juno, will-power.

The Oriental influence, brought to bear upon Greek art, is evident in the Cypriote statues which show both Egyptian and Assyrian tendencies, blended with Phoenician. The Mycenae remains would show indications of a prehistoric period and are probably of Corian or Lycian origin. The Greeks constantly came in contact with foreigners in their scattered colonies, and were quick to make use of any discoveries.

As to the periods of sculpture, the time of the great Phidias was marked by severity, dignity, grandeur. In it such gods as Zeus, Minerva and Juno dominated in art. This we must remember, was the golden age of Pericles, or the time immediately following the Persian wars. Power, dignity and grandeur mark the era, of which Phidias and Polycletus were the exponents. The period of Praxiteles and Scopas, which follows, is a time of effeminacy, of growing luxury. Venus, Cupid, Bacchus are its favorite types, — light, graceful, lovely, but not *strong*. The period of Lysippus or the Alexandrine age, was the time of the spreading of Hellenism, but not an age of creative genius. The works of this time are marked by technical perfection, increasing complexity, and a tendency toward exaggeration and extravagance. The works of this period have been mentioned in naming the statues found in the chief galleries. This was a most productive era, and is the time when most of the works were carried off by the Romans.

Greek sculpture and architecture both received their inspiration in religion, and so grew up side by side. When after the Winckelmann revival, Greek history, poetry and sculpture began to be studied and copied, so it was with architecture. This revival took place not long before the French revolution, and so not far from the American revolution, we find the Greek architectural style of building is characteristic of the early part of the century. In America, we have Girard College, Rush Library in Philadelphia; many buildings in Washington; and in London,

the British Museum; in Paris, the Madeleine. These buildings, however, are not even perfect copies of Greek temple style, as curvilinear perspective and many other irregularities of construction had not then been discovered or were considered accidental. In truth, this style is not well adapted to modern uses, consequently it has gone out of fashion.

The renaissance buildings used the classical features, such as the pillar and gable, but merely as ornaments and not as structural necessities.

In modern Athens the chief centre of attraction is found on the Acropolis, which contains that most magnificent of all Doric temples, the Parthenon. It is surrounded by an outer colonnade of columns, with a double row at each end. Inside was the treasury and shrine containing the chryselephantine statue of Minerva, by Phidias. The temple of the Wingless Victory is a graceful little Ionic temple, which was in reality a shrine to Minerva. The Erechtheium is also Ionic. It differs from most Greek temples in having two winged porticoes. The Propylea, the gateway to the Acropolis, is a superb entrance-way, built in mixed Doric and Ionic styles. The Choregic monument of Lysicrates is the best type of a Corinthian monument. It still stands in what was once the street of Tripods, where it was placed for the Choregus, Lysicrates.

Of the three orders of architecture the Doric is the oldest. It dates back to the Dorian migration. About eighty years after the Trojan war, the fierce Dorians descended from their mountain homes on the North, and either enslaved or drove out the conquered inhabitants. Soon after this arose the famous Doric columns, which showed so many Egyptian features. Both the shafts themselves and the triglyphs prove their Egyptian origin. The general features of the order were, massiveness, simplicity, and unbroken outline. The Ionic and Doric orders were used contemporaneously, but the Ionic was a later growth, having arisen among those tribes, which were driven out by the Dorians, and who fled to Attica and Asia Minor. As the Doric order is characteristic of its people, who were stern, simple and hardy; so the Ionic was graceful, and more effeminate like the Ionians themselves. This order was the favorite style after the Peloponnesian War, when the age was characterized by general effeminacy of taste.

The Corinthian order was really the same thing as the Ionic, only more highly ornamented. The elaborate decoration of the acanthus leaf was used for a capital, in place of the simply coiled lotus leaf. This order was used most during Roman times, and was well suited to the luxurious tastes of this Alexandrine epoch.

The chief remains of buildings outside of Athens are to be found in the ruins of Mycenae, the temple at Bassae, temple of Zeus at Olympia, the ruins at Sunium, the temple of Minerva, at Ægina, the remains at Corinth, the three Doric temples at Paestum, Italy, one to Neptune, one to Ceres, and one that is nameless. There are also one or two ruins in Asia Minor, and some at Selinus in Italy. The works at Selinus are particularly interesting for the metope sculptures which belong to the Sixth Century B. C. One of these reliefs represents Perseus slaying the Medusa; another Hercules carrying off Cercopes. In these the figures are short and thick set; the curls are prim and archaic, and the faces have the rather silly archaic smile. Here however the critics claim that "the artist tried hard to tell a simple story in a simple manner."

Though in general, Greek temples borrowed features from the Egyptian ones, yet they were very unlike in results. Greek temples were simple, and usually unbroken in outline, light came from above rather than from windows in the sides. The building had very few rooms, only vestibule, sanctuary and treasury, while Egyptian buildings had many rooms. Roofs of the Greek shrines instead of being made of heavy stones, were made of wood covered with terra cotta slabs; so we have no remains and therefore cannot be certain as to the mode of lighting. The colonnade of a Greek temple was its chief beauty. It seemed to be an invitation to enter the building.

As the Corinthian and Ionic styles were essentially the same, in distinguishing between the orders we have only to deal with the Doric and Ionic. In general as we have noticed, the Doric is simple, massive and grand; the Ionic light, graceful and pleasing. The chief distinction lay in the columns. In the former there were generally twenty shallow flutes, with sharp joints between; in the latter there were twenty-eight, with broad joints between. This had the effect of throwing deep, long shadows and so apparently increasing the height. The Doric shaft had no extra base, the Ionic had one, in order to increase its height. The columns of the first class were about five and a half diam-

eters high, those of the second eight and a half, and much farther apart. The Doric abacus was thick; the Ionic very thin. In the older style we notice that the shafts are surmounted by a double line of beams, and a sculptured gable on either end. The entablature of the Doric temple was divided into three parts, architrave, frieze, and cornice. In the Ionic temple the cornice instead of being plain was ornamented by three horizontal lines, while the frieze was not divided into triglyphs and metopes like the Doric border.

There were no perpendicular and no horizontal lines in Greek temples. Columns leaned inward and toward the centre. The ground line had, in the Parthenon, a curve of two and a half inches in two hundred and twenty feet. All these irregularities which are mentioned by Vitrivius have since been proven by the measurements of Penrose and Pennythorpe, and they undoubtedly added their quota toward the enhancing beauty of these structures.

The colors used on Greek buildings were reds, blues, terra cottas and golds, which ornamented the frieze, metopes and cornices.

In reference to the qualities of the Greek architectural sculptures, it is to be noticed that they were not intended for as fine a purpose as the other statues, and consequently were executed with less exactness, and more for effect. As we have very few pieces of Greek sculpture which were not made for architectural purposes, something even better than anything we now have would be required to demonstrate what Greek plastic art really was at its best.

I have already mentioned the contrast of the old Greek temples compared with modern copies; which are not adapted to present-day uses, and which are not even perfect copies. During the Italian Renaissance, the artists were merely attempting to copy what they thought to be original Roman styles. "In architecture," a modern writer says, "the Greek *variety* might have been improved, the proportions never."

On the whole when we compare the Greeks with other nations and notice the simplicity and calmness of their lives, we need not be surprised to find its reflection in their works. In their monuments there was nothing fantastic or realistic, nothing theatrical or full of evident effort but always they seem to maintain "the just balance between soul and body."

THE NEW EDUCATION.

(IN THREE PARTS.)

SUPT. C. B. GILBERT, ST. PAUL, MINN.

II.

AS I said in my first paper, Pestalozzi brought a great new principle into education which was however largely absorbed into the older systems by reason of the strength which the idea of formal discipline had acquired. This was rendered possible because Pestalozzi while a great educational reformer, had practically no knowledge of psychology and was unable to base his new ideas upon any philosophy. As Doctor DeGarmo has pointed out, it was a matter of sentiment rather than of reason with him. Still, he laid the foundations for a great reform. There were in his carefully elaborated studies seeds which might by cultivation develop into a new scheme of education. He really started for education the same movement that Bacon had started for philosophy more than a century before, namely, the getting down from abstract premises developed into an interminable chain of logic to the consideration of concrete facts. Pestalozzi aimed to make the child an original investigator, to bring him into touch with nature, but he had not the training or the learning necessary to the development of a psychology of education. His scheme also very easily lent itself as we have seen to the old intellectualized and intellectualizing psychology of the faculties.

Froebel who followed, brought into education that which was better than all the old psychology, the sympathetic study of children and an attempt to meet their evident needs, to give them freedom. Froebel established a new institution for young children but did not immediately greatly modify existing educational institutions. There was needed a philosophy which could unite the scientific spirit of Pestalozzi with the sweet spirit of Froebel.

Such a philosophy arose during the latter days of Pestalozzi's own life and had received considerable development before Froebel came into prominence but did not become a living force in

education until the present generation. It is to John Frederick Herbart that we owe the inception of the great ideas which are reforming our educational systems. Herbart, while in some respects not as great a philosopher as Hegel or Kant, yet developed certain phases of philosophy which are more helpful to education than anything in the work of these great men. There is not time to give in detail an account of his psychology and its development by his followers into a system of education, still, it is impossible to clearly understand these latter-day movements without some knowledge of their origin. Herbart was a philosopher rather than a teacher. His experience in teaching children was brief and consisted only in private tutoring in the family of a friend where, however, he was allowed free exercise for his somewhat original ideas upon education. But, very early, he was greatly interested in the problem of national education and was convinced that the prevailing systems were in many respects wrong. He read Pestalozzi's writings and agreed with them in the main, wrote a fuller exposition of "How Gertrude Taught Her Children," and later, wrote several educational works outlining a quite complete system to a certain extent based upon Pestalozzi's ideas. But whereas Pestalozzi's method of teaching was merely a method, Herbart's ideas were really revolutionary, just as his psychology really overturned the old psychology of the faculties. And Doctor Harris is right, if he is to be consistent, in insisting that Herbart's doctrine of the will is a radical departure from existing opinions, though I do not think he is right in failing to find in it a basis for moral character any more than the theologian is right in asserting that there can be no religion or morals without systematic theology. There is much about Herbart's doctrine of the ego which is fanciful no doubt but as I understand it the central point is this: There is but one soul for the individual. The faculties, so-called, are not distinct but are merely varying forms of activity. The soul products are the resultants of various influences. The opponents of Herbart say that he denies self activity to the soul; his friends do not admit this.

Now I will not attempt to be metaphysical, but will give what I understand to be the real doctrine of Herbart, laying aside all reference to the monad or the atom or the real constitution of the soul. The will is not an independent faculty but the result of

activities, it is a product of growth and can be cultivated. No action is without motive. To say that the will is an independent force sitting aside by itself and without regard to motives of habit or preceding conditions of mind determining this or that, is, according to Herbart, absurd. The action of the will is always due to excess of desire in some direction. While we are in a sense self-active and independent, yet, we always do act in the direction of the strongest impulse: what we most desire, that we do. If a temptation presents itself in a current of thought and I put it away, say to it "get thee hence Satan, I will none of thee," and say on the other hand to the good thought "come and dwell with me," this is not merely because the will is self active and independent but because the motive to do good appeals to me as stronger than the motive to do ill, or to use Herbart's term, "the desire for good is stronger than the desire for evil." This may be due to habit of thought. Many temptations fail to appeal to us because we have no habit of thought which makes them tempting. Certain good things it is easy for all of us to do because we have acquired the habit of doing them. Moreover action of the will may be due to the presentation of motives from without which appeal to the desire. A boy may desire to steal a water-melon but he sees the owner looking which suggests a train of thought sufficiently powerful to overcome his desire and he wills not to steal it. His will was self-active and independent but not entirely self-determining. A boy knows that his mother needs his help. He wants to go and play ball. He has an independent will which can choose: it is absolutely certain that he will decide according to the motive which appeals to him as strongest. If he loves his mother and has cultivated the habit of doing unselfish deeds, that will appeal to him as a stronger desire than the other, but the action of his will is determined by the strength of his desire. Strength of desire is due to habit and to motives presented through the senses or through trains of thought. That, as I understand it, is in substance Herbart's doctrine of the will. It does not seem to me so very heterodox after all. In fact it is quite similar to what so orthodox a philosopher as Mark Hopkins in quite recent times has advocated. I dwell upon it at this length because its relation to education is important. It does away with the faculty theory, showing that the soul is to be trained as a unit for a single definite purpose

and it brings into education what all the old systems lacked, definite and unified moral training.

If the will is not a little deity elevated on a throne, uninfluenced by motives, arbitrarily willing itself to heaven or hell but is a part of the mind, capable of being trained, influenced by the total mental condition, subject to habit, capable of being affected by the trains of thought current in the intellect, then the will, the moral part of us, is teachable, and even the secular school may be made the chief means for making the world better.

It is also important to education because of its relation to freedom. It leaves the mind no longer subject to formal discipline but largely training itself through acts of the will according to motives, which makes it absolutely essential for the educator to present to the child the subject matter of his curriculum in such a way that it will appeal to his interest and hence furnish motives for action. It no longer makes no difference what the subject matter of the curriculum is, provided it furnishes the necessary gymnastic. It no longer becomes possible to place form above content because it yields itself more readily to the demands of formal discipline; it is rather of the greatest consequence that the world of knowledge be presented to the child in right relation so that through his habits of thought he shall acquire right motives and shall be led to do right acts.

The psychology of Herbart, while, as I have said, in some respects fanciful, and while in some other respects widely different from other psychologies, has this great distinction, it spiritualizes education, frees it from the thralldom of a low intellectuality, brings it into touch with civilization and makes the nature of the child as related to that civilization its basis. Herbart's discussion of education really preceded his development of psychology. The latter seems to have grown, to a certain extent, out of his study of education and the need which that made evident of a better psychology.

The three fundamental principles of Herbart's pedagogy are moral training, apperception and interest, the two latter being really united into one principle. One of his chief works is "The Moral Revelation of the World Through Instruction." He believed that all school education should have an ethical trend. Holding the views which I have stated it is easy to see how the will, the center of morality, can be trained by the presentation of

thought matter through instruction. The second great principle is that perception is nothing without apperception, that all learning is apperception, or, in the term of the old psychology, assimilation. The importance of this as a guiding principle in arranging courses of study may easily be seen. The third is the doctrine of interest, — that everything presented to the child should appeal to his interest, so only will it be apperceived and so only will it produce those currents of thought which tend toward morality.

The Herbartian pedagogy then differs from the old education both in aim and method. Instead of aiming at the discipline of the faculties it goes further and aims at the training of the soul to a good life. The work of the school is divided into two parts, instruction and government, and through both the attempt is made to develop character. The especially new and striking feature is moral training through instruction. This grows naturally out of the psychology of Herbart. If character is a growth, if the will is educable, if the action of the will depends upon a motive which comes through a train of thought, then education must seek to cultivate character, to train the will by the presentation of such subject matter as will arouse trains of thought which will furnish to the soul right motives and stimulate right desires. Morality is not a matter apart from life, it is life. It has to do with all human relations. Evil thinking not only leads to evil doing, it is evil doing. You cannot separate the acts of the soul and say this is moral and this unmoral. The soul is a unit and its activities spring from good motives or bad motives. Life is one and our characters are the sum of all our desires and activities.

If this be true it is also true, as the Herbartians say, that morality is not something to be taught by itself, not something to be laid on as a special course but something to be implied and inculcated through every portion of the school curriculum which furnishes the circle of thought; by every association of the school life. Hence, the accomplishment of this end, that is, of such trains of thought as shall lead to ideals and encourage a right disposition in the soul, is the prime aim of education and must determine both the subject matter of the curricula and the method of presentation.

Herbart divides moral ideas into five classes, which I will simply mention:

First. The idea of inner freedom which arises from the inner relation between our acts and our insight as to what is right and wrong; so that when one has deliberately acted in accordance with his own belief as to what is right he is internally and subjectively free.

Second. The idea of efficiency of the will.

Third. The idea of good will which is the opposite of ill will and is the key to such virtues as kindness, benevolence, charity.

Fourth. The idea of justice.

Fifth. The idea of equity.

It is Herbart's theory that these ideas can be implanted through instruction, or, as he puts it, the moral order of the world can be revealed to the child through instruction. It is not enough that the child be made acquainted with moral laws, his instruction must be of such a character as to supply motives, arouse desire, and thus stimulate the action of the will. If this end is to be accomplished through instruction it is evident that instruction must become quite different from its past. Certainly the ordinary instruction of the school room does not stimulate the will to altruistic endeavor. Indeed, as we have seen in the previous lecture, the extreme tendency of formal discipline to intellectuality has been a positive injury to the moral nature, and further, the child driven to his task and pursuing it without interest or desire, while he may gain some strength of will, will not gain efficiency of will or good will; and here comes in the doctrine of interest as applied both to choice of subject matter and method of presentation.

Interest depends upon apperception, the word of which we have heard so much in recent educational discussions. Now what is apperception? It is that mental process by which a new idea coming into the mind through sense perception or some mediate form of mental activity, as memory, finds its place and worth in the soul's stock of ideas. It has long been known under the name of assimilation, but has not been applied as fully as by Herbart and his followers. Nothing is learned that is not apperceived. The completeness of the apperception determines the completeness of our possession of the new idea. In apperception we not only know the thing apperceived itself as a distinct entity, we know it in its relations. It becomes a unit in the unity of consciousness. What we apperceive depends upon our mental

content. We can apperceive only those things which have some sort of relation to this content. You cannot teach the highest morality to a savage, it would be incomprehensible to him. You cannot talk Greek philosophy or even Herbartian to a lot of fishermen. It is with knowledge as it is with wealth: the more you have the surer it is to accumulate. The child apperceives vastly less than the cultivated adult. To the mind not attuned to higher harmonies Niagara is merely a great water-power. Money spent for works of art and libraries is wasted. At a place like the World's Fair it was comparatively easy to see what each different visitor apperceived. The lady who in the rotunda of the Art Building asked a friend of mine what building that was could not be said to apperceive art ideas.

Apperception then is the psychological key to interest and attention. No one can be interested in what he does not apperceive. If you know nothing of science you cannot sit down and read a technical treatise on goniometry with interest, while it might be absorbing to one who apperceived it. If instruction is to result in a higher morality it must naturally include only that which can be apperceived and which interests the child, because only through interest can motives and desires be presented which will create ideals and end in moral activities. Why is it that many a boy trained up in the strictest way of religion and morality, taught the catechism, able to repeat scripture, has gone to the bad? Simply because his moral and religious instruction did not interest him. That is, it did not arouse through apperception such trains of thought as could produce ideals and prompt him to follow them. Our will inevitably obeys the strongest motive. If religious and moral instruction have been presented in such a way that the child's interest is not stimulated, that immorality seems to his childish mind more attractive than morality, when he becomes free from parental restraint he is likely to go the way of his interest. Especially is this likely to be the case if morality has been treated as a thing apart and not a homogeneous product of all that passes through the mind.

Herbart has much to say of a many-sided interest as the safeguard of the soul, as the preventive of narrowness, one-sidedness, bigotry, and the control of evil motives. This many-sided interest is to be given the child by his instruction, the subject matter of which must be selected for this purpose rather than for the ends

of formal discipline. As President DeGarmo has well put it, "not discipline and knowledge, but discipline through knowledge" must be our motto. Those subjects must be selected, first, which appeal to the child through apperception, those which interest him, so that he gives voluntary attention to their acquisition. This is simply preliminary. Further, those subjects must be selected which will give him this many-sided interest, that is, will put him into touch with his immediate material and social environment and also with that wider environment extending into both time and space, the environment of man made clear through literature, history and geography. This many-sided interest must be of such a sort as to supply him with desires and motives and stimulate him to altruistic activities.

The second element in the education of the child for moral ends is government. Government is for two purposes. Securing obedience to law and consequently proper conditions for study and meditation is one, but the inferior end of government. The other and great end is the creating in the child the idea of social relation and obligation, the sense that he belongs to humanity for its good can be stimulated by the relations and activities of the school room and Herbart's doctrine, which none of us will dispute, is that love should be the controlling element in the school room, in the intercourse between teachers and pupils and among the pupils themselves. With this spirit, government is made to supplement instruction in acquainting the child with the moral order of the world and create in him that form of will, which, not arbitrarily, but as the result of motives stimulated by the entire train of thought and the whole environment of life, shall act for the good of others.

Let me recapitulate. Herbart's pedagogy is revolutionary in that it supplies schools with both a new motive and a new method. The motive is moral training. Herbart claimed that through instruction the child may be made acquainted with the moral order of the universe and given ideals which will lead him to do right. Morality is conduct and rests upon the action of the will. According to Herbart the will is not altogether self-determining; it is rather the product of forces and grows as the rest of the being grows and is hence educable. All acts of the will are determined by motive which is itself created by desire and desire grows out of thought process. Hence, moral educa-

tion, which is the aim of Herbart's pedagogy, is possible, because the teacher can to a degree determine the child's thought content, hence, his desires, his motives, his ideals and his will.

The new method of the Herbartians is education through interest, in opposition to education by formal discipline which disregarded the child's interest. The Herbartians make interest the focus and determining point both in the selection of the subject matter and the method of presentation. This interest depends upon apperception, which is the giving its proper place and value to all new ideas and their absorption with the old into the unit of the soul's content. This interest must be many-sided, must bring the child into sympathetic and spiritual relations with his environment both immediate and remote in time and space, and by creating through interest desires, and through desires motives and ideals, lead to wise and beneficent action of the will.

This instruction which is to acquaint the child with the moral order of the world is to be supplemented by the government of the school, which determines his actual living while in the school, his relations to his teacher and fellow pupils, and thus acquaints him with society and the social idea, accustoms him to consider himself a member of the social organism and to subject his personal wishes to the good of the many.

In my next article I shall attempt to show more in detail how these principles are carried out by the various schools of Herbart and what in my judgment can be done in our own American schools along this line.

DON'T get so absorbed in teaching the ancient history of Greece and Rome that home geography and body culture have no attention at your hands.

KEEP the balance even if possible, but if either side outweighs the other let it be the practical.

SEE if the statute of limitations ought not to operate actively on some of your ways and means.

EQUIP your pupils for life instead of for examination.

L. A. G.

SCHOOL EXPENDITURES IN CANADA.

RAY GREENE HULING, Sc. D.

IN Canada, the leading educational issue at present is the Manitoba school question. In that province the majority has decided upon the adoption of a system of public schools, instead of dividing the school funds between the Catholics and the Protestants, as is the rule in the other provinces. To certain of the minority, this action seems a violation of the act by which Manitoba became a province. Hence, an appeal has been taken to the Dominion Parliament at Ottawa. In the federal government, however, neither the conservatives, who are in power, nor the liberals, who are in opposition, are quite ready with a remedy for the delicate situation. Accordingly the whole matter has been postponed for some six months, during which period, doubtless, some compromise or adjustment will be devised. On the main issue Americans will naturally have sympathy with the Manitoban majority. Yet it should be remembered that the public school in Canada is not yet anywhere a free public school. It is supported from three sources, — school taxes, provincial grants and tuition fees. The proportion in which its support comes from each of these cannot here be fully stated; but certain figures can be given relative to the first two items. These figures rest on data collected for the year 1893, and are prepared by the Dominion statistician, Mr. George Johnson.

He finds that in Ontario, ninety-three per cent. of the total expenditure on public education is paid directly by the people through school taxes, and only seven per cent. by grants from the provincial exchequer. In Quebec, the proportion is eighty-seven per cent. by the people to thirteen per cent. by the province. In Nova Scotia, the people pay seventy-six per cent. and the province twenty-four per cent. In New Brunswick, the proportion is sixty per cent. by the people and forty per cent. by the province. The citizens of Manitoba pay directly in school taxes twenty-one per cent. only of the cost of their public schools, while the provincial government contributes the remaining seventy-nine

per cent. In Prince Edward Island, the proportion is very much the same, namely, twenty-three per cent. by the people and seventy-seven per cent. by provincial grant. The source of the provincial revenue, thus drawn upon so largely in some of the provinces, is corporation taxes, the sale of public lands, and licenses of various kinds. In Ontario, seven per cent. of the entire provincial revenue goes to the schools; in Quebec, four per cent.; in Nova Scotia, twenty-three per cent.; in New Brunswick, twenty-three per cent.; in Manitoba, seventeen per cent., and in Prince Edward Island, fifty-four per cent. — more than half of the total yearly income of the province.

In this connection it is interesting to note the expenditure per capita for education in Canada. The figures given seem, however, to exclude the amount paid as tuition fees by the parents. Manitoba is seen to expend proportionately more upon public schools than any other province in the Dominion. And when comparison is made with the data for 1888, the case is even better for the young province. In Ontario, expenditure on public schools has remained stationary at $1.87 per head of population. In Quebec it has increased from eighty-one cents to eighty-seven cents. In Nova Scotia it has fallen from $1.51 to $1.45. In New Brunswick it has risen from $1.26 to $1.31. In Prince Edward Island it has changed from $1.36 to $1.40. But in Manitoba it has gone from $1.57 in 1888 (then the highest figure of any province except Ontario), to $2.02 in 1893, which is much above the rate in any sister province. British Columbia made also a large increase, from $1.40 to $1.87; but it must be borne in mind that there is as yet no public assessment for education in the Pacific province.

From these figures it appears that the movement for public schools in Manitoba is accompanied by a genuine willingness to give those schools a generous support. This fact will tend to increase the sympathy which Americans feel for the Manitoba government in its present attitude. May it not be well for our Canadian brethren to consider, now that the question of public education is up for discussion, whether the Manitoba plan should not be broadened so as to make the schools free as well as public, and then extended throughout the Dominion?

EARS AND EYES IN SPELLING.

SUPT. WM. D. PARKINSON, AMHERST, MASS.

IN the hope of obtaining some light upon the vexed question of written, versus oral, spelling, inquiries were sent to a considerable number of the leading institutions for the blind, for the deaf, and for both. It would seem that by eliminating now one sense, now the other, we should discover which is the more serviceable in spelling. But it requires a degree of intelligence to ask intelligent questions, and doubtless it was due to some lack in this particular that the questions failed to elicit a response from many of those from whom light was sought. Replies were received from but twelve institutions, seven for the deaf, two for the blind, three for the deaf and blind. Plainly, any conclusions based upon so few data would be of little value, but as they afford comfort to either side of the controversy I think they may be of interest given entire. The letters indicate the institutions, the same letter standing always for the same school throughout. A to G are schools for the deaf, H to K those for the deaf and blind, M and N those for the blind.

Question 1. Is there any especial difficulty in teaching the deaf to spell?

Answers. A, No. B, No. C, No; It is a strong point with them. D, On the contrary, they are as a rule easily good spellers. E, None. F, No. G, There is. To the hearing spelling is merely the written expression of a spoken word. To the deaf it is the word itself. He has consequently to learn separately and arbitrarily every uncompounded word, while the hearing person has to learn the less difficult combinations which approximately represent sounds.

H, Yes. Trouble seems to be that they consider each word simply as a collection of letters which may be arranged according to rule or not (able may be spelled albe or abel, etc).

J, No. K, The deaf and dumb have no difficulty, if they spell at all, for the reason that a word with them is simply a collection of symbols, and if the letters are not arranged in a certain order they do not convey an idea. They sometimes forget the combi-

nation but it is almost always a transposition of letters, like "turly," for "truly."

M, No. N, No.

Question 2. Is there any especial difficulty in teaching the blind to spell?

Answers. F, No. G, No. The hearing-blind are to be classed with the seeing-hearing as far as spelling is concerned, the sight being merely replaced by touch. H, Yes. J, Yes. K, There *is* very great and especial. This grows out of the fact that they do not have the advantage of sight to help out their memory. Everyone knows how helpful the eye is in correcting his spelling, and how often the doubtful word is written "just to see how it looks."

M, The blind usually learn to spell *orally* quite as readily as pupils with sight. In written work they do not generally spell well, and seem to apply their oral spelling with difficulty. N, Yes.

Question 3. If you have had experience with both, with which do you find the greater difficulty in this respect?

Answers. D, The blind, perhaps, a little. F, The blind. H, The deaf. J, The blind. K, The blind are very bad spellers. The only way in which we have overcome the difficulty is by constant use of typewriter, which gives valuable practice.

M, The blind spell orally as well, but not in writing. N, The blind.

Question 4. Are these differences between the normal, the deaf, and the blind, due directly to the difference in the senses employed, or do other causes enter in?

Answers. B, No difference. C, I think that the correct spelling of the deaf is chiefly due to constant practice with both the manual alphabet and writing. D, The deaf have no trouble growing out of the unphonetic spelling of many English words. F, Other causes. G, They are. H, To a considerable extent, yes. But (especially in case of the deaf) other causes enter in. J, I think it is due to the senses employed. K, Due to difference in faculties employed. As a rule, the deaf spell better than either the blind or the normal, although they do not understand language as well. The normal spell better than the blind because they have the advantage of sight to aid the memory. On the other hand, he is distracted by the tendency to phonetic spelling,

which the deaf are free from. The blind, who are the worst spellers, have to depend entirely upon memory. M, I have ascribed the difficulty to lack of practice in reading and in writing. On account of the comparatively slow methods of reading and writing necessitated by their infirmity they do far less of both than do pupils with sight. The general introduction of the typewriter, necessitating and permitting more and more rapid writing, has to some extent improved written spelling. N, To the senses.

Question 5. In the case of deaf pupils are the best results obtained by appealing wholly to the sense of form, or by associating spelling with vocalization?

Answers. A, By associating spelling with vocalization. B, To the sense of form. I do not think that vocalization *necessarily* enters into the matter of correct spelling at all. C, I do not think that vocalization among the deaf helps them to spell. Those who never speak are excellent spellers, most of them. Muscular memory is one element in the good spelling of the deaf. D, I do not think that association with vocalization gives any advantage. E, Have never taught without oral work. F, With the sense of form. G, No benefit is derived from associating spelling with vocalization. H, By appealing to the sense of form. J, By associating spelling with vocalization. K, The deaf depend wholly upon the sense of form.

Question 6. In the case of the blind, is spelling best taught by associating letters with sound through the ear, or with form through the muscular sense?

Answers. F, Through the ear. G, With sounds through the ear. H, By a combination, using both ear and fingers. J, With form through the muscular sense. K, That depends very much upon the individual. Some get their spelling through hearing, others through touch. M, We put matter for spelling into the hands of our pupils in all cases and I am not able to answer with any certainty. As a matter of fact, however, pupils in preparing spelling study much together, one reading and the others listening, so that undoubtedly in very many cases lessons are learned entirely by sound. This is likely to be the case with those who read with least facility, and as a matter of fact the poorer readers are usually, but not always, the poorer spellers. This latter fact, however, may be due to a mental condition which affects both reading and spelling. N, Through both.

Question 7. If both, which receives the greater emphasis?

Answers. F, The ear. G, The former. J, With form through the muscular sense. K, Taking the opinion of the blind themselves in this school, the preponderence of evidence is in favor of acquiring spelling through the touch. M, We do not lay direct stress upon sound. In many cases lessons are dictated to be taken down by the pupils in the absence of spelling books of the desired grade or character. When proper books are available, lessons are not dictated before they are learned, although they are usually discussed with reference to signification and use. Nevertheless I am inclined to think that in spelling, sound does play a larger part than touch with the majority of blind pupils. This is, however, not based upon sufficiently careful tests to give the opinion definite value. N, The latter.

The preponderence of evidence, then, is that there is no especial difficulty in teaching the deaf to spell (9 to 2); that there is such difficulty in teaching the blind (5 to 2); that the differences between the deaf, the blind, the normal, is not however due wholly to the differences in senses employed (5 to 4); that in case of the deaf, the sense of form furnishes the basis of spelling memory (6 to 3); that in case of the blind, the sense of form alone or supplemented by that of sound, furnishes a better basis than the sense of sound alone; but the last point is not so decisively settled as the others, being determined by three positive answers, as against three less positive ones.

Although I do not attempt to draw conclusions, I call attention to one or two points which present themselves. Most of the replies to Question 1 seem to relate to the difficulty of *teaching*, and turn upon the degree of success attained. G, however, seems to contemplate the amount of effort required of the pupil in learning. The two factors do not always vary directly. Some interesting features will be brought out by putting together all the replies coming from one source. For instance, J teaches the deaf by associating spelling with vocalization, thus apparently supplying the missing sense of sound; but with the blind, who possess that sense, he discards it and appeals to the sense of form which would seem to be equally available in the case of the deaf. Probably the inconsistency is only superficial and would not have appeared had their replies been more full. H is the only one who finds greater difficulty with the deaf than with the blind.

Were the difference a positive one, we might find it more than a coincidence that he is also almost the only one who teaches the blind by a combination of the sound and the form methods. But unfortunately, he is also the only one to call both the blind and the deaf bad spellers. The fact that the typewriter is found an important agent in teaching the blind to spell, taken together with the other experience given, seems to compel the belief that spelling is less a matter of form than many have supposed. That it is directly dependent upon memory is clear, but whether it is memory of form, of sound, of muscular action (as C suggests), or of a concept produced by all three senses, is the real question. It would be interesting to know what image is before the mind of the blind pupil as he works the typewriter, or of the deaf pupil as he uses the manual alphabet.

There are in these replies some allusions to the tendency to phonetic spelling as a hindrance to good spelling among those who hear. This serves to emphasize the folly of a system of spelling which compels us to work against a tendency natural to those in full possession of their senses. If, as seems to the writer, the spelling memory is acquired by grafting upon the product of the sense of form those of the sense of sound and of the sense of muscular extension, as perception of the third dimension is acquired by grafting the muscular sense upon the sense of sight, the conclusion is inevitable that the process would be greatly facilitated by making the association between the two phenomena, form and sound, as close and invariable as possible.

Every variation between the spoken and the written symbol burdens the mind of the child and of the man with an additional image. That they are not conscious of effort does not prove that virtue is not gone out of them, which might have been saved for useful labor. Spelling is not the most important of subjects, but like the children's diseases, it occupies as large a portion of human life as many more serious subjects, and it is a question whether the man who reduces measles, whooping cough, mumps and spelling, will not be as great a benefactor as the one who contends with diphtheria and grammar.

THE SAN SISTO MADONNA.

ELIZABETH PORTER GOULD.

They say in the heavenly mansions
That Beauty will show us her best,
Her rarest Madonnas and Cherubs,
And angels we've dreamed of as blest.

And while they are telling the story,
I wonder if she will forget
To come for our lovely Madonna,
The one that her Raphael set

On the clouds to await her fair coming,
With cherubs to open the way,
And saints that eternally worship
The light of the heavenly day.

If this be thy mission, San Sisto,
O queen of the art of this world,
May I in that heavenly mansion
Again see thy beauty unfurled!

DRESDEN, August, 1894.

AN AMERICAN KING.

H. C. KIRK, PHELPS, N. Y.

He uttered words heard round the world,
  His thought will span the arc of time,
  His life, so humble yet sublime,
In robes of regal worth impearled,
The flag of simple truth unfurled
  To lead the few of every clime;
And from the height, scaled rime by rime,
Against all wrong, his strength he hurled.
Exalting age and race as well,
  His field was nature more than art,
    The earth, not "the proud world," he won;
But ages will his conquests swell,
  Till bears each sympathetic heart
    The royal name of Emerson.

EDITORIAL.

WE regret that press of work has thus far prevented Dr. Harris from furnishing an article to EDUCATION. But we feel sure it will not be long before he will be able to do so.

AFTER two struggles for liberty, — one in our own behalf and the other in behalf of the colored race, it is natural that the sympathies of the citizens of the United States should be on the side of the insurgent forces in the present struggle in our neighboring island of Cuba. There is the added influence of the natural instinct to sympathize with the "under dog in the fight." And when we *know the big dog*, and have many times had occasion to note his ugly and bullying disposition, there is an almost irresistible inclination to get a club and take a hand in the fight. We are restrained in the present instance by treaty obligations, and the Washington government is making earnest efforts to keep within the terms of the treaty. Nevertheless the moral force of public opinion is being more and more strongly felt. Petitions are being circulated and largely signed to secure such action of Congress as will make this public opinion more tangible. We acknowledge that we earnestly desire to see the autonomy of Cuba peacefully and permanently secured.

THAT brilliant and eccentric literary exile from Oxford University to Canada, with an annex at Cornell, has lately taken occasion to inform the country that in the common school in the United States "the one moral and social duty inculcated is that of rising in life." As the latest survey of the Christian world has convinced our learned critic that revealed religion has been demonstrated a hoax, and the thing now to do is to follow the earthly gropings of Prof. Huxley in search of a new foundation for religious faith, it is difficult to see what better thing can be taught young America than the duty and method of honorably "rising in the world." If the Professor means that the American common school represents no higher moral ideal than the materialistic scramble to rise in life at all hazards, he betrays that most deplorable form of ignorance so often witnessed in that large class of scholarly and thoughtful men in every walk in life of whom it may be repeated what was said of a distinguished senator in Congress; — "He can see a crack in a barn door and describe it more accurately than any man in the United States; but, somehow, he always fails to see the barn."

PRESIDENT ELIOT of Harvard, seems to us unduly exercised in behalf of the superior boy under our present system of education. He tells us, with somewhat wearisome iteration, that the business of the school is to develop the individuality of the pupil and, by inference, that one youth, endowed with special genius, is of more importance than a school-house full of the common sort. In this he seems to fall into a delusion, not uncommon to the great educator, that the school, if not the whole, is certainly the most important agency of education. But, in a country like ours, where everything tends to stimulate individuality to the extreme of eccentricity, we hold that one of the most valuable uses of the people's common school is that it holds fast to the wise conservatism of grounding young America in the few elements of knowledge and character and habits of thought common to all men, leaving the development of the differences and superiorities to the irresistible influence of life outside. While the one office of the University is to train the special aptitudes of the student before his entrance into active life, all experience demonstrates that the superior minds of every age and land fail oftener than otherwise from lack of knowledge of the common level of life and of sympathy with the common people amid whom they live. The biography of the upper strata of mankind would not have been such a melancholy wreck of wasted powers, fruitless activities and mistakes, follies and sins that have imperilled the lives and happiness of millions, could each of these great creatures have enjoyed, during childhood and early youth, the most wholesome mental and moral training on earth, as now found in its best estate in good American common schools.

ANOTHER of the ready writers of Manhattan, Mr. Bok, informs the country that a great social peril impends from the fact that the young women of the present are out of sympathy with their mothers and fail to confide in and take advice of mamma, as in the good old times. Just when those special good old times existed we are not informed. Horace Mann, in his own inimitable way, half a century ago, used to denounce and ridicule the awful reticence and lack of understanding and sympathy for the young folk in the Puritan household of New England. Certainly, the present mothers of respectable families in the Middle and Western states of our Union, as a class, are not only better educated, but in every way more in sympathy with the higher aspirations and laudable efforts of their daughters, than their great-grandmothers, who wore out their lives in the terrible toils of settling Western New York and Pennsylvania and the new West of

seventy-five years ago. We have not learned of any alarming decline in the ample capacity and perennial disposition of the Southern young woman to talk with mamma or grand-mamma; to say nothing of her unrivalled accomplishments at both giving and receiving advice from the other members of the family of the sterner sex. Probably there are young women, possibly more of them as the country grows older, who, through the influence of new-made wealth and foolish parental indulgence are out of gear with everything save the mad chase for pleasure at their own sweet will. But here, again, Mr. Bok falls into the chronic mistake of the class to which he belongs of judging 10,000,000 of American young women by the female environment that usually constitutes the social circle of the popular semi-Bohemian literary oracle of the metropolis of journalism.

THE holding of a great exposition (probably second only to that which marked the centennial anniversary of our country,) in the region that suffered most from the late civil war, is a happy event which will be productive of great good to all classes. The Atlanta Cotton States Exposition will have great educative value. It will distinctly advance the material, intellectual and spiritual interests of the colored and the white race. It will hasten, perhaps more than anything else could, the disintegration of class prejudice and race distinction. It will at once emphasize the need of a thorough industrial education of the negro and illustrate the remarkable progress that has already been made in training him to earn his own living. The object-lessons afforded in the exhibition of the results of his work and the notice given by the press of the world to the symptoms of his progress should be stimulative in the extreme to his ambition. The coming together and the conference of those most devoted to the work of his uplifting should bring forth fruits in new ideas and new methods of instruction of a practical sort. We think that the great value of this exposition will lie along these lines rather than in the attainment of any mere material ends. It will historically take its place as marking one of the most important stages in the rapid evolution of the slave into a free and respected citizen of the United States.

Indicative of the justness of this estimate is the already widely praised sentiment of the oration by Pres. Booker T. Washington of Tuskegee, Ala., at the opening of the Fair. Among many noble sentiments uttered were these words:

"Our greatest danger is, that in the great leap from slavery to freedom we may overlook the fact that the masses of us are to live by the productions of our hands, and fail to keep in mind that we shall pros-

per in proportion as we learn to dignify and glorify common labor, and put brains and skill into the common occupations of life; shall prosper in proportion as we learn to draw the line between the superficial and the substantial, the ornamental gewgaws of life and the useful. No one can prosper until he learns that there is as much dignity in tilling a field as in writing a poem. It is at the bottom of life we must begin and not at the top."

Mr. Washington is perhaps the ablest living educator and orator belonging to the colored race, and in his own person forever sets at rest the old lie that the negro is incapable of the highest culture and civilization.

MISSED A CROWN.

AN INTERESTING CHAPTER OF SOUTH CAROLINA HISTORY.

McDONALD FURMAN, RAMSAY, S. C.

SOUTH CAROLINA has had one prominent man of whom it may be said, "He missed a crown." An account of him and his family forms a chapter of interest in the annals of the historic Palmetto state.

The Middletons are not only one of the most distinguished, but also one of the oldest of the Carolina families. An account of them and their estates reads almost like the history of some noble family of England. Before the English had been permanently settled in the colony a dozen years, we find Edward Middleton a member of the council under the Lords Proprietors. He was born in England and inherited a large property. His son, Arthur Middleton, headed the Revolution which threw off the rule of the Lords Proprietors and placed the province directly under the protection of the English crown. He was afterwards governor of the province. Henry Middleton, son of Arthur, was president of the Continental Congress in 1775.

The most famous of the Middletons was Arthur, who was a signer of the Declaration of Independence. He was the son of Henry (just mentioned), and was born at the family seat in 1743. He received his education in England. In 1779 he took the field in defense of Charleston, and the following year he was made a prisoner, but was afterwards exchanged. At one time during the Revolution he declined the governorship of his state. He died in 1787. His home, the Middleton Place (which was in the low country of South Carolina) has been destroyed, but the following "pen picture" of the grounds, published in 1888, will give the reader an idea of what a fine place it must have been: —

"The old gates with their massive pillars stand intact, but of the homestead itself only the chimneys and parts of the walls remain. At Middleton Place, an Englishman would feel at home even to-day. Many of the old terraces and hedges remain as they were a century ago, and the ample grounds which are tolerably well kept, have a decidedly English air. This place is still in possession of the Middleton family."

During the present century this family has furnished one governor to South Carolina; that was Henry Middleton, son of the "signer"; he filled the office 1810–'12, after which he served in Congress, and was also, for several years, minister to Russia. When a young man, he travelled a good deal in Europe, and for some time during the French Revolution, was in France. His death occurred in 1846.

Governor Middleton and the late Gov. Benjamin F. Perry, were both members of the Union party during the stirring times of Nullification, and Governor Perry, in his delightful "Reminiscences" (which can well be read with pleasure and profit by many others besides South Carolinians), has given us a pleasant sketch of Governor Middleton, with whom he was well acquainted. Among other things he says:

"Governor Middleton told me that he was personally acquainted with almost every distinguished man in Europe. He saw Bonaparte in every station which he had filled, from that of General of the Interior to his seat on the throne of France. He was on terms of intimacy with him whilst he was General of the Interior, and was in the habit of visiting his family. At one period of their acquaintance he received encouragement to address his step-daughter. 'Little did I then think,' said Governor Middleton, 'that she would ever be a queen.'"

Am I not right in saying that Governor Middleton missed a crown? Who can doubt that, had he married Napoleon's step-daughter, he would afterwards have been made king of some European country by the great warrior, and he would undoubtedly have made a wise and just ruler. We may suppose, however, that as governor of an American state he was probably far happier than he would have been as king of some European country.

Crystallize the truths you present to your class, rather than hold them in solution.

DISCUSSING THE REPORT.

A RECENT meeting of the New York Schoolmasters' Club was devoted to the discussion of the Report of the Committee of Fifteen. Commissioner Harris presented the salient features of the report dealing with the course of study in elementary schools and with educational values. As these can be obtained from the report itself, they will not be repeated here. The discussion was opened by Prof. L. Thompson of Jersey City, who expressed his delight at finding the Committee's presentation of the aesthetic side of drawing as a school study. A succeeding speaker however, declared that while the Committee properly advocates the indirect aesthetic training that can be obtained by placing in the school-room the masterpieces of art and by the tasteful decoration of the school-room, it does not favor the direct teaching of aesthetics as such to the immature pupils of the grammar schools. While a scholar should be led to draw beautiful forms in his drawing lessons and to feel their beauty, the expression of that appreciation should be left to a later stage. He believed that the time spent in telling him that the drawing was beautiful because it had unity and symmetry, etc., was so much valuable time taken from the pupil's attempt to reproduce the beautiful form, or what is the same thing, his own observation of the form.

Principal Hess of New York, dissented from the Committee that Latin should be the language studied in elementary and secondary schools. "He that has never studied another language knows not his own." But in schools where the scholars hear another language at home, instruction in that language would be preferable to the study of language because of the scholar's better acquaintance with the living tongue. German gives as thorough practice in inflection, in literary and in grammatical training as the Latin, with the added value that comes from its being allied to the Saxon, the mother of English grammar.

Another speaker advocated the study of History in a more logical way than that recommended by the Committee. He thought that children should learn first the development of the race from the hunting and patriarchal and agricultural stages as admirably exemplified in the life of our Indians down to the complex development of modern American civilization. He explained how this was done, even with very young pupils.

General Ketchum of the New York Board of Education, spoke in a way that pleased all his hearers. He said that we need the enthusiastic mathematician, the scientist and the advocate of literary training in constructing a course of study for common schools. All should be allowed "to have their say," and the favorite study of each should not be presented to our pupils, but no one allowed to preponderate. The true teacher would encourage the individual pupil in his studies and take account of any special aptitude he might have for any particular branch without neglecting any one feature of an all-round training. The proper correlation of all school branches would be the effect of the Committee's report.

Doctor Briggs of Brooklyn, presented a layman's view of the subject. He valued the report for advocating proper methods, but he valued it more highly for bringing out so plainly the need for the best men in our schools. Men who should be leaders of thought and givers of inspiration. He quoted Garfield's definition of the best college as a "log with Mark Hopkins at one end and the pupil at the other." Doctor Briggs feared that too much stress is laid upon methods. We want *men*. His old teacher of literature used a very bad method, yet, because he was a man with a genuine love for literature himself, he inspired his pupils with a similar enthusiastic love for literature and its training. He would alter the quotation to

> "Ill fares the School to hastening ills a prey,
> Where Methods accumulate and Men decay."

Commissioner Hunt thought that the discussion had thus far been on unessential details of the report and had not brought out its broad, philosophic spirit. The subjects had been taken up in the report in a thoroughly logical way. First, Language, which gives the power to the child to express his thought and makes thought possible; next, History, which is accumulated race experience; and then Mathematics, which is necessary to train his reason. Mathematics for the common schools meant arithmetic. This subject is a sort of fetich, receiving undue proportion of the time. Nine years are spent in teaching arithmetic, when five years would be ample to complete the subject if the essential portions only were taught, leaving the "conundrums" to be taken up properly with algebra. The seventh and eighth years would be given to geometry and algebra.

A Brooklyn principal, who had taught in New York schools, did not think that any of the time given to arithmetic was wasted on unnecessary portions of arithmetic, or that any true advance would be made by cutting short the arithmetic and giving a smattering of algebra and geometry. Another principal agreed.

President Seth Low of Columbia, then refused to discuss the report of Commissioner Harris, on the ground that he was not well enough acquainted with elementary schools.

Another speaker said the report held up a high ideal, though none the less practical for that reason. It demanded better trained teachers. Its great value was in showing the need for the widest culture and broadest training of the teachers in our common schools. The teacher that had a love for science and enthusiasm for literature, for aesthetics or for mathematics, would have no difficulty in inspiring his pupils with a desire for a liberal training and for higher education. But would the Normal schools produce the teachers needed? Every teacher in the common schools should have a college education to make him carry out the plan of proper correlation proposed in this report. Our present corps of teachers in New York numbers in its ranks, men who are able to do this because of their training in the College of the City of New York. Its course presents that variety of study in each branch of human thought, language, literature, history, science and mathematics, and aesthetics, that fits its graduates for the presentation of the course of study in our grammar schools in accordance with the plan of Correlation advanced by the Committee of Fifteen. How else could they be properly prepared to do their work when the highest grade had fourteen different subjects in its course of study. Would the course of study at a Normal school do it, including as it does so much waste of time in the study of pedagogy, psychology, etc, which might more profitably be left to the time when the teacher has been actively engaged in teaching. The time was too short for the general training, the mind of the normal student too immature to properly grasp those subjects, and besides, in a proper course the methods used in presenting the different subjects were the best practical lessons in pedagogy. The great thing was to get the teacher liberally educated and with his thoughts actively roused by his training, he would be able to cope successfully with the problems of his class-room. Nor is correlation a new thing. Every good teacher sees that his scholars punctuate and spell correctly the questions given out in arithmetic. He has them draw maps of the campaigns studied in history, how the physical contour of the state affects its development. He has correlated these subjects. He has made each lesson a lesson in expression of thought, whether by language, by writing, or by his drawing. The great value of the report would be in destroying the false notion of the grade teacher that her grade was a separate part of the scholar's life education and would teach her to make it an integral part of the pupil's education.

H. G. S.

FOREIGN NOTES.

BELGIUM.

The new school law for Belgium (its principal innovation upon existing conditions was noted in the last number of EDUCATION), has passed both houses and received the king's sanction, consequently it will control the conduct of schools for the coming year. The clause that has provoked the most feeling is that making religion an obligatory subject and placing it under the supervision of the clergy. It is presumably directed against the 153 schools (out of a total of 5,778) that have not made provision for religion as an optional subject in accordance with the law of 1884. These secular schools are located in Brussels, Antwerp and other cities having large Liberal constituencies. Earnest appeals are made to citizens interested in preserving these schools from clerical domination to assist in such demonstrations as shall arouse a powerful sentiment in opposition to the odious measure.

It should be added that there is a show of respect for private conscience in the clause of the new law, exempting the children whose parents so request from attendance upon the religious instruction, but, as forcibly expressed by the London *Journal of Education*, "with the almost inquisitorial powers of the Belgium priesthood such a clause must prove a dead letter."

FRANCE.

The movement for political decentralization which has developed great vigor in France, has important bearings upon education. The two chief evils that attend upon the exercise of centralized power, namely, excess of irresponsible officials and local apathy, are abundantly manifest in the country. To quote from the address of the newly-formed "Decentralization League," "France is on the eve of succumbing to a fatal disease, — anemia in the provinces, and hypertrophy at Paris." Among the most active members of the league are two former ministers of public institutions; M. René Goblet and M. Léon Bourgeois, both of whom favored all measures looking to an increase of local responsibility in respect to schools and higher institutions. Although an immense interest has been aroused by the efforts of the league, the most ardent of its supporters do not look for any immediate realization of their purposes. All they can hope for at

present is the reduction of the vast army of office-holders, and a slight increase of the authority of local elective bodies. In proportion as these changes are effected primary schools will become more and more the care of the communes or of the larger cantonal districts.

A second movement which is attracting much attention is that emanating from the government for the increase and improvement of schools for adults. The serious purpose of the government in this respect was indicated by a ministerial order issued in March last, deputing M. Petit, a professor in one of the public lycées, to make an exhaustive inquiry into all the conditions bearing upon adult instruction and to report in full to the Minister the results of his investigations. The report just published in the official *bulletin* is voluminous and covers fully all questions of methods, programs, instructors, apparatus, resources, etc., that must be settled before courses of instruction are actually organized. It must not be supposed that this is a new effort made by the government in its contest with ignorance. Adult schools or classes were included in the scheme of popular education as originally formulated by the Republic, but with compulsory attendance upon elementary schools enforced, the need of such courses in the elementary branches diminished and the number of adult pupils rapidly declined. But while these courses are no longer required as a means of overcoming gross illiteracy, other evils have arisen which it is believed may be successfully resisted through such an instrumentality. A large proportion of children reach the obligatory standard at a very early age and arrive at maturity with vague and confused remnants of their early attainments, in many cases the little knowledge secured simply serves to sharpen the criminal propensities. Added to these evils is the increasing revolutionary spirit. The clericals claim that these conditions are the outcome of a purely secular education. "You have detached the people from the church" is their cry, and its effect is seen in a reaction toward church schools. The republican leaders, who have regarded popular instruction as the chief means of perpetuating their system, respond that the fault is not in the principle, but in its applications, and chiefly in this that it frees the young from all wholesome restraints at too early an age. In this connection is to be found the cause of the revived interest in adult instruction. The government is aroused to the fact that it is necessary to continue some form of guidance and control through the years of adolescence. As an index of the importance which the subject has assumed, it may be noted that the "Havre Society for instruction by objects," celebrated its fifteenth anniversary in May last by calling a congress of all societies for promoting popular instruction to discuss this very subject. The congress

convened in August, and was attended not only by representatives of the French societies, but by many delegates from foreign countries. Its deliberations are not yet published, but doubtless they will have great effect upon the practical measures to be adopted. While the future policy of the government in respect to public courses for adults is not fully formulated, it is evident that the instruction provided will pertain to subjects beyond the elements and that every means will be employed to make it interesting and of practical utility to the students. Meanwhile private societies throughout the country are redoubling their efforts in the same direction.

PRUSSIA.

The *Revue Internationale de l' Enseignement* publishes an account of recent bequests to the University of Berlin, from which the following particulars are derived: In the last eight years the University has received nine legacies of the total value of about $450,000, intended for the benefit of poor students or young savants who could not pursue their studies without aid. The largest single bequest is that of $191,700, by the Countess Louise Bose. The interest of the sum is to be divided annually between a medical student without fortune, a member of the medical profession for the purposes of foreign study, and an annual prize the destination of which is not specified.

ENGLAND.

English educational journals are commenting with more or less satisfaction on the first appearance in Parliament of members representing the interests of elementary education from the professional standpoint. After repeated failure the National Union of Elementary Teachers has succeeded in getting two members into the House. Messrs. Gray and Foxall, upon whom the responsibility has fallen, are both men of force and thoroughly familiar with the educational wants of the country. The former has begun his legislative career as the advocate of a pension scheme for teachers, and the latter as the friend of the child laborer, who now groans beneath the double burden of toil and compulsory education.

The growing importance of social problems is illustrated in the publication of two notable government reports. One of these, i. e., "Criminal Statistics," forms the beginning of a series and marks the first attempt in England to separate this subject from civil statistics in general. This report affords an interesting confirmation of the idea that the period of adolescence is emphatically that in which restraints

are necessary. The statistics here tabulated show conclusively that for the ages sixteen to twenty-one, the proportion of criminals is much higher than for any other period. The only satisfaction that the report is able to draw from this prevalence of juvenile crime is that the penal system of England is possibly efficacious in reforming the criminal.

The second report, to which reference has been made, is issued by the labor department. It deals wholly with the employment of women and girls, and is very complete as regards the number and distribution of the working women of England and the wages they receive. Additional value is given to the report by discussions of the bearing of the data on the competition of men and women, and the relative increase of women in specific industries. The report is an interesting evidence of the advantages to be derived by employing women to examine into the social conditions of their sex. It is the work of Miss Collet, one of the most indefatigable investigators in the social field.

The local activity in respect to provision for technical instruction fostered by the law of 1890, which placed a large sum of money at the disposal of the county councils for that purpose, continues to be a marked feature of current reports. The opinion is general that the funds appropriated for this work from the public purse (above three and a half million dollars annually) should be in part applied for the benefit of women, and so far only eighteen councils out of one hundred and seven give equal educational advantages to both sexes.

A. T. S.

THE LITTLE GENTLEMAN IN VELVET.

A TEACHER'S INFORMATION STORY.

A VERY odd little gentleman you will think him, when I tell you that his black velvet suit fits him as well as your skin fits you, and that he doesn't any more think of taking it off all through the week, day and night, than you do of taking off your skin.

His eyes are very small, and as for his ears, you can't see them at all. Yet he can hear better than you or I, for all that, for he has very good ears inside of his head.

He lives much of the time under ground, and digs there as busily as a farmer, though he has no spade, or hands to hold one, for that matter. By this time you are not surprised to learn that he has four legs instead of two; and if you haven't guessed it already, I will tell you that by the little gentleman in velvet, I mean a tiny creature something

like a mouse, called a mole, that lives in the fields. I once saw one in an autumn walk. He was going along by the roadside minding his own affairs so well that he did n't seem to know I was there, though I was close to him.

Perhaps you have seen the little heaps of dirt that the mole throws up as he works his way underground in search of the worms which are his food. His home is a wonderful place. He digs a hole for his house, and makes paths all around it, with little cross-paths connecting them, and other roads leading away from the house in all directions, all under ground. So it would n't be a very easy matter to catch him.

I said his house was under ground, but it shows as a little hill, he has to throw out so much earth to make it. Just think what strong paws he must have to dig so well! Inside a large mole-hill you will sometimes find a nest with baby moles and their mamma; not quite so airy as a bird's nest, but very cozy and comfortable.

See if you can think of ways in which the mole troubles the farmer, and also ways in which the mole is useful. You can hardly believe it, but long ago when an English king was hunting, his horse stumbled at one of these little mole-hills, and threw his rider. That was a great deal of mischief for a mole to do. C.

AMONG THE BOOKS.

To accommodate readers who may wish it, the publishers of EDUCATION will send, post paid on the receipt of price, any book reviewed in these columns.

In Houghton, Mifflin & Company's Riverside Literature Series we have Hawthorne's TWICE TOLD TALES, as number 82. It is a quadruple number and is printed in clear, large type and handy form at fifty cents a copy. Also, Doctor Holmes' AUTOCRAT OF THE BREAKFAST TABLE in the same form and at the same price.

Whatever one's views on the complicated subject of the national finances no one should fail to read COIN'S FINANCIAL SCHOOL. It has made a sensation throughout the United States and reached a phenomenal sale. It presents all the best arguments for the unlimited coinage of silver, with a clearness and persuasiveness that is captivating, and the sharp points and keen hits at those of the opposite persuasion are most entertaining. The illustrations are exceedingly telling and help to impress the argument and to fix the facts cited upon the memory. We admire the author's cleverness and we advise all to read this book; those who are opposed to its doctrines that they may know the strength of the positions which they have to assail. But with all its brightness and keen, racy, literary finish we lay it down with the feeling that the author is an adept at making the worse appear the better reason rather than at making clear the essential truth of his subject. Published by Coin Publishing Company, Chicago, Ill., 25c.

PSYCHOLOGY IN EDUCATION, by Ruric N. Roark, of Kentucky State College, is a worthy addition to the rapidly growing literature of the science of education. Intended primarily for teachers, it is adapted as well for the uses of all whose business it is to educate the human mind and influence its growth. Parents and all other mature persons who deal with youth in any responsible relation will find this work most suggestive and profitable. The American Book Co. : New York. $1.00.

From the American Book Company's presses we have also a fine text-book on PATRIOTIC CITIZENSHIP, by Thomas J. Morgan, LL. D., ex-United States Commissioner of Indian Affairs. The object of the book is to stimulate patriotism and promote good citizenship. The plan followed strikes us as a particularly happy one. Questions are asked, — such as, What is Patriotism? Why do we love our native land? What is the office of the flag? etc. These questions are then answered by quotations from patriotic speeches and writings of distinguished statesmen and authors, from George Washington to the present time. The finest sentiments of our noblest thinkers are thus brought together in a single volume and the result is a work that will be alike useful to the rising generation and deeply interesting to those now on the stage of action. Price, in attractive cloth binding, $1.00.

SONYA KOVALEVSKY : Her recollections of childhood, translated from the Russian by Isabel F. Hapgood ; with a biography by Anna Carlotta Leffler, Duchess of Cajanello, translated from the Swedish by A. M. Clive Bayley ; and a biographical note by Lily Wolffsohn. This is the authorized American edition of a work which has excited great interest in Europe. It is the story of the life of Sophia Kovalévsky, Professor of Higher Mathematics in the University of Stockholm, author of a work to which the Institute of France gave a high prize, and whose works are quoted as authoritative among mathematicians. Her life is an extremely interesting study to all who are concerned with the development of women in lines of activity but recently opened to the sex. She fell in love with a Russian who asked her to leave science and her honors and come to him to be "only his wife." She refused. He left her and she died in 1891, of a broken heart. New York : The Century Company ; 1895.

We acknowledge a convenient GEOMETRY TABLET FOR WRITTEN EXERCISES, prepared by Beman and Smith, and published by Ginn & Co., Boston.

In the series of Longmans' English Classics, Washington Irving's TALES OF A TRAVELLER with an introduction by Brander Matthews, A. M., LL. B., with notes by George Rice Carpenter, A. B., makes a handsome and readable volume. Longmans, Green & Co., New York and London.

THE GREATER POEMS OF VIRGIL ; VOL. I., FIRST SIX BOOKS OF THE AENEID, by J. B. Greenough and G. L. Kittredge, is a carefully revised and improved edition of a standard text-book. The illustrations have been increased in number and are excellent. Ginn & Company. Boston.

ANIMAL LIFE ON THE GLOBE, by G. C. Chisholm, is a bright little book packed full of information about reindeer, Polar and brown bears, walrus, bisons, beavers, turtles, gulls, swallows, ants, bats, locusts, silkworms, salmon, kangaroos, lions, elephants, the rhinoceros, hippopotamus, giraffe, camel, boa-constrictor and condor. It is an admirable book for children to read, especially to illustrate their geography lessons. Boston : Boston School Supply Co.

Songs From The Woods of Maine, by Julia H. May, is full of genuine poetry. Miss May is already widely known for her poems which have appeared largely in the religious press. Readers of Education will recall several of these poems as appearing from time to time in our pages; among these being "The Old Red School House," "Memory's Class," "Lowland Music," and "Discipline." Many hearts will respond to the sentiments so beautifully expressed in "Mysteries," "One Year Ago," and "O! Wanderers of Maine." The author of these poems has studied well and thought deeply and loved tenderly and suffered as only sweet and noble natures can suffer. And out of these varied experiences comes this little book which will comfort, refresh and cheer many burdened and suffering ones. We thank her for her unalterable faith in Christ. New York: G. P. Putnam's Sons.

How Christ came to Church, is a very remarkable little book by the late Rev. A. J. Gordon, D. D. It is a dream, but full of waking, vital thought. Few men in America during the last quarter of a century could compare with Doctor Gordon in spiritual power. He lived in the very presence of his Master. This dream, written out but a little time before his death, early changed and deepened the whole current of his religious and ministerial life. His face as well as his speech became an inspiration to those who came in close touch with him. There is matter in this little book which will greatly bless many lives, so that in very truth it may be said of the author, "he being dead yet speaketh." Dr. A. T. Pierson, his coadjutor and friend, has added several chapters throwing much light upon the life and character of Doctor Gordon. Philadelphia: American Baptist Publication Society. Price, 75 cents.

My Friend Pasquale, and Other Stories, is a very readable book of short tales by James Selwin Tait, author of "Who is the Man?" "The Neapolitan Banker," etc. Our scholarly author-publisher is a man of wide reading and choice gifts. He writes with great rapidity and *con amore*. He seizes vigorously upon a subject and presents his characters in a very clear, telling, even startling manner. Pasquale is a strong story. It presents a young man of most lovely character and tender feelings, as seen by his friend, but a brutally fiendish murderer when under the influence of periodic insanity. This is portrayed with intense vividness and consummate tact. The scenes are laid mainly in London. The other very interesting tales are: The Lost Wedding Ring, Two Ninety-day Options, A Strange Story, Two Christmas Eves, Glancing Shafts, and The Legend of the Red Moss Rapids. One who begins this volume will be sure to complete it. New York: Tait, Sons & Co.

Plain Facts for Fair Minds, by George M. Searle, C. S. P., is a little handbook containing answers to questions put by those seeking to know about the Catholic church. Father Searle writes with frankness and very simply sets forth what the truth is as it appears to his mind. New York: Catholic Book Exchange.

The New Gradatim, by Wm. C. Collar, (Boston: Ginn & Co.), is a revision with many additions and omissions of the well-known "Gradatim," an easy Latin translation book for beginners. The editor in his revision has made changes demanded by the newer methods of teaching and has prepared a book which will suit the needs of the most exacting of teachers. It is admirably adapted for use in grammar schools.

In THE CHRISTIAN CONSCIOUSNESS; ITS RELATION TO EVOLUTION IN MORALS AND IN DOCTRINE, by J. S. Black, we have one of the most thoughtful books of the year in the domain of Christian philosophy. It is a clear, forcible and scholarly vindication of the right of the reverent Christian believer, be he a cultured savant or an unlettered peasant, to assert a positive *knowledge* of certain truths as over against the unbelief of the agnostic or the disbelief of the sceptic. The limitations of mere human science are clearly pointed out. Science cannot account for the origin of the material universe, nor, at the other end of the scheme, can it offer a fair field for the development and final perfection of man. Christian consciousness supplies these and other deficiencies. It assures man of his divine sonship and vouches for an immortality wherein the unfinished story of his activities can be worthily completed. Christian Consciousness is placed along with the Bible, the church, and the reason as a source of authority, and is shown to be by no means inferior but rather more trustworthy as well as more universal than the other three traditional standards. The book will be welcomed as a splendid contribution to Christian polemics and will aid a large number of intelligent Christians to reconcile the experience they have attained in things spiritual with the faith of the Fathers. Boston: Lee and Shepard, $1.25.

To Hassfeld's series of foreign language books have been added a new ENGLISH AND FRENCH VOCABULARY, alphabetically and analogically arranged and designed for use in schools and in private reading. It is one of the most comprehensive and unique arrangements published and is a very handy work for reference. The compilers are H. Lallemand and A. Ludwig. From the same publishers we have a little book containing SHORT AND AMUSING ANECDOTES, to be translated into French. Numerous notes are furnished and all idiomatic expressions are freely translated. London: Hirshfeld Brothers.

A PRACTICAL FRENCH GRAMMAR, by Mortimer De Lamoyer, is fashioned on the good old lines, differing not much from the Ollendorf method. The book is divided into thirty-seven lessons, each lesson consisting of some short exposition of the language, a vocabulary, a dialogue and an exercise. The book has had a successful career as this is the revised edition we are now noticing. If the lessons were all learned, the vocabularies committed to heart and the exercises faithfully translated, the student must have acquired considerable knowledge of French. London: Kegan Paul, Trench, Trübner & Co.

From D. C. Heath & Co., Boston, come LA DEBACLE, by Emile Zola, edited with notes by Benjamin W. Wells, and FLEURS DE FRANCE, consisting of fine short stories, selected and annotated by C. Fontaine. These are the latest additions to Heath's Modern Language Series and will doubtless find their way into immediate use in the schools.

THE FRENCH VERB, by A. Esclangon, Examiner in the University of London, is a newly devised, easy, uniform, and synthetic method of treating by conjugations that most troublesome part of speech. The author's aim has been to give the principle of the method in a single system and by an ingenious arrangement has produced a scheme which will commend itself to all teachers and students of French. It is logical, simple, and easy of comprehension, and it merits the attention of learners and users of the French language. New York: Macmillan & Co. Price $1.25.

THE WERNER PRIMER, by F. Lilian Taylor, is an ideal book for first year pupils. Miss Taylor has by her book broken down the wall of partition between the kindergarten and the primary school. She has projected the Froebelian principles and as much of the system as is necessary to secure definite results, up into the primary work and thereby blends and harmonizes the kindergarten and primary systems. It is not possible in a brief notice here to give the method by which Miss Taylor accomplishes this great work, neither is it practicable to recount the many excellent features, all new and novel, in her book. In a word it may be said that for originality of design, excellence of execution, beauty of illustration, harmony of color, this primer is unsurpassed. It is newer, fresher, brighter, than any primer in the market. It makes all other primers out of date. Primary teachers must secure this book that they may understand its worth and beauty. Price, 30 cents. Chicago, New York, and Boston : The Werner Company.

THE ESSENTIALS OF ARITHMETIC, BOOK II., by Gordon A. Southworth, is designed for use in upper grades, and contains a vast array of new and valuable material for the student to use in the arithmetic lesson. The book is cast in entirely new lines and is original, fresh, bright, and intensely practical. Boston ; Leach, Shewell, and Sanborn.

PERIODICALS.

The three *Harpers*, — *Monthly*, *Weekly* and *Bazar*, maintain their high standard and their firm hold on the public mind. There is scarcely a department of human enterprise and interest which is not touched upon in the numbers of these publications for September and October. —— A paper of unusual personal interest in *Scribner's Magazine* is George W. Smalley's estimate of Professor Huxley. —— Theodore Roosevelt contributes to *McClure's Magazine* an article on the Sunday closing of the New York saloons. The price of this popular magazine has been reduced to $1.00, and since the reduction (in July, 1895), the circulation has increased eighty per cent. —— The *Arena*, besides all the usual features, has some articles this month of special interest to educators, among which may be mentioned Helen M. Gardener's "Battle for Sound Morality," and G. Vrooman's "Manual Training for Women." —— In the *Forum*, Hon. Charles S. Fairchild presents the "Present Aspect of the Silver Question," showing that sound money is more in favor than ever before. —— Mrs. Ward's powerful serial, "A Singular Life," is concluded in the October *Atlantic Monthly*. —— *Lippincott's Magazine* has a thoughtful consideration of "Domestic Service," by Mary C. Hungerford. —— Volume X., No. 3 of the *Political Science Quarterly* is rich in profound discussions of vital subjects. —— *Godey's Magazine* for October is a Southern number, apropos of the Atlanta Exposition.